



EdData II

Research on Reading in Morocco: Analysis of Initial Teacher Training *Final Report: Component 2*

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Research on Reading in Morocco

Analysis of Initial Teacher Training

Final Report- Component 2

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Abbreviations

AREF	Regional Academy for Education and Training
BAJ	Barnamaj alaoulaouiat alijtimaia
CFI	Teacher Training Center
CNIPE	National Center for Teaching Innovation and Research
CNEE	National Center for Evaluation and Testing
CNEEO	National Center for Evaluation, Testing, and Guidance
CNEF	National Charter for Education and Training
CNM	multi-level classes
COFI	initial teacher training curriculum
CPR	Regional Center for Pedagogy
CRDAPP	Regional Center for Teaching and Learning Resources and Events
CRMEF	Regional Center for Professionals in Education and Training
CSE	Higher Council on Teaching
DC	Directorate of Curricula
DETVS	Directorate of Technical Education and School Life
EGRA	early grade reading assessment
ENS	normal school (for training secondary school teachers)
FUE	university teacher education track
IS	in service
ITQANE	Improving Training for Quality Advancement in National Education
MENFP	Ministry of National Education and Vocational Training
NGO	nongovernmental organization
PIRLS	Progress in International Reading Literacy Study
PNEA	National Program for Educational Achievement Testing
PS	preservice
UCFC	Central Unit for Civil Service Training
UCRP	Central Unit for Pedagogic Research of the MENFP
USAID	United States Agency for International Development

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Preface

Morocco is a country with unique cultural and linguistic assets thanks to its historical influences and to its geographical position at the crossroads of sub-Saharan Africa, North Africa, and Europe and its proximity to the Middle East. The official language of the country is Arabic (known as “classical Arabic” or “modern standard Arabic” [MSA]) while native and community languages used by most children are either a Moroccan version of colloquial Arabic (Darija) or one of the Amazigh languages and its regional variations, such as Tamazight, which is spoken in the South, and Tashelhit in the North. Wherever it is spoken, Arabic is characterized by “diglossia,” that is to say, the co-presence of two language variations, one that is used in formal education and is codified, and another that is used in regular exchanges in everyday life. In Morocco, MSA is used in the school and governmental offices, while Darija is the local variation, largely limited to oral expression with no written codification.¹ Darija is constantly evolving by integrating words in French, Spanish, Amazigh, etc. Even within Morocco, Darija can vary from one region to another. As many words of Darija are identical to MSA, it is not considered a separate language, but this does not mean that the two languages are mutually intelligible. An individual who has never been to school and only speaks Darija at home will hardly understand MSA.² Amazigh, on the other hand, uses its own alphabet, which is neither Latin nor Arabic. It is recognized by the Constitution as an official language, and the methods of its integration in schools, government offices, and society are still being negotiated.

The National Charter for Education and Training (CNEF), introduced in 2000, aims to achieve three objectives:

- Primary education for all and improved education in quality and performance
- Reformed educational system
- Modernized educational system

However, as the end of the decade approached, in 2009, the Government of Morocco was forced to put in place a national emergency program to attain the above objectives. This program extended the deadline for achievement of the objectives to 2015 and added one more objective: The eradication of illiteracy.

Moroccan children start primary education at the age of 6 years old. Primary school runs for six years, followed by three years of secondary education until the age of 15. The standard Arabic (MSA³) is the official teaching language starting from the first grade. In Morocco, French is still used in public life, and is considered the mother tongue of some Moroccans. It is introduced from an early age as a teaching language in some preschools. The CNEF recommended access to education for all school-age children and delivery of quality

¹ On the other hand, more recently the use of new technologies—especially SMS and online discussion forums or social networks—has spurred the codification of Darija phonetically, using the Latin alphabet, with the use of numbers for phonemes that don’t exist in that alphabet; for example: “fus7a”, where the number 7 represents a version of the phoneme /h/.

² FHI360 (2013). *Mapping for reading best practices: Moroccan organizations improving reading skills in and out of school. Draft Report*. Report prepared for USAID/Morocco.

³ Throughout this report, the term “Arabic” may be understood to refer to MSA, whereas “Darija” is used when referring specifically to the variation spoken in Morocco.

educational services. The Charter granted fundamental importance to learning reading skills in preschool:

... activities to get started on learning reading and writing skills in Arabic, particularly through having good command of spoken Arabic, and relying on mother tongues. (Article 63, p 33)

If the drop-out rate at the primary level is still estimated at 38 percent,⁴ this is partly due to difficulties caused by languages of instruction, low initial teacher training, and high rates of teacher absenteeism.⁵ According to the data obtained from the evaluation of the Emergency Education Program, lack of schooling is mainly due to cost, accessibility, and family problems; however, the implementation of a student monitoring system was successful in reducing repetition rates.⁶ The quality of education is also an important factor in whether a child stays in school.

Learning to read is the key to academic success. Reading, writing, and arithmetic skills constitute the basis of all future student achievement. Academic success is furthermore associated with other economic advantages that will benefit the individual and the country. However, Morocco is losing this advantage because of the lack of quality learning for all children in the first school years. In 2007, the Progress in International Reading Literacy Study (PIRLS) report ranked Morocco in second-to-last place among the participating countries, with a score of 323 compared to an average of 500 in other countries. The same report showed that 74 percent of students do not reach the minimum threshold required to develop their reading skills. The 2011 report shows an even lower result, with Morocco having dropped to 310 in the field of reading. This downward trend in the level of reading of Moroccan students was observed between 2003 and 2011 for secondary education as well.

Similarly, the 2008 reading assessments, done by the National Center for Evaluation and Testing (CNEE) (now the National Center for Evaluation, Testing, and Guidance [CNEEO] after inclusion of guidance [the National Program for Educational Achievement Testing (PNEA) program]) in collaboration with the Higher Council on Teaching (CSE), produced the following results, in rate of correct answers, and further validated the conclusion that reading skills are low in Morocco in the early years. *Table P-1* provides the results.

Table P-1: CNEE Reading Assessment Rate of Correct Answers

Language	Grade 2 of elementary	Grade 3 of elementary
Arabic	32%	43%
French	31%	33%

Source: CSE, 2008

Finally, in 2011, the United States Agency for International Development (USAID) funded an evaluation conducted by RTI,⁷ an early grade reading assessment (EGRA), in the region of Doukkala Abda, using an oral methodology that gives accurate and reliable results. The

⁴ UNICEF, At a glance: Morocco. Retrieved August 8, 2014, from http://www.unicef.org/infobycountry/morocco_2238.html

⁵ FHI360. (2013).

⁶ SOFRECO (2013). Evaluation de mesures et de stratégies mises en œuvre dans le cadre du programme d'urgence pour l'éducation au Maroc [Evaluation of strategic measures put in under the Emergency Education Program of Morocco]. Rapport Final [Final Report].

⁷ See www.eddataglobal.org.

EGRA⁸ showed that only 34 percent of students in the second and third years of primary school could read well a text adapted to their level in Arabic and fully understand its meaning. A large share of boys as well as girls could not give the names of the letters of the alphabet or read simple words; 33 percent of second grade students and 17 percent of third grade students could not read a single word of the text (these students are called “non-readers”). Only 2.5 percent of the surveyed students correctly answered 5 out of 6 questions on comprehension. The assessment showed that the factors that affect students’ performance are multiple and complex:

- Lack of teacher training: Studies have shown that Moroccan teachers receive little or no specialized training in reading instruction and the assessment of students’ reading skills, leaving them ill equipped to enable students to succeed in the first years of primary school.
- Lack of supplementary reading materials: Without these materials for all students and the school, the global learning environment is greatly limited.
- Lack of reading materials at home: Few children have the chance to read outside the school. Only 9.5 percent of students answered that they do use their textbooks at home or read every day at home. Over 52 percent of students reported that they never read aloud at home, and only 32 percent do so “sometimes.”
- Lack of parental involvement in student and school achievements: Parents meet with teachers at least once a year, but the majority of teachers believe parental involvement is insufficient.
- Diversity of languages: The linguistic context of Morocco further complicates the learning environment.

Within this framework, USAID and the Ministry of National Education and Vocational Training (MENFP) decided in early 2013 to scrutinize some of the factors that promote or hinder the acquisition of reading in Arabic in the early years, through three components of a broad study, namely:

1. A review of curriculum and learning materials (textbooks, teachers’ guidebook, etc.)
2. An analysis of initial teacher training and reading instruction
3. An analysis of the perceptions and attitudes of teachers and how they influence practice

The question of reading improvement has not always been overlooked, but deserves to be discussed more deeply. Here are some direct and indirect examples of previous activities:

- The promotion of reading in primary schools in rural areas under the BAJ (Barnamaj alaoulaouiat alijtimaia) or Social Priorities Program. Several buses were purchased and equipped as libraries, with books, comics, textbooks, dictionaries, etc. These bus libraries were supplied in the 14 provinces covered by BAJ. The main objective was to bring the information center to students and enable them to access various sources of reading.

⁸ RTI International (2011). *Student performance in reading and mathematics, pedagogic practice, and school management in Doukkala Abda, Morocco*. Report prepared for USAID under EdDataII.

- A pilot project launched in five provinces, consisting of a project on workshops for reading. The pilot aimed to make reading material available to students and to teach them to read in conditions different from those in the classroom.
- School theater activities, organized in all schools, allowing students to play and learn from texts. Students were motivated to represent their schools at provincial, regional, and national level events (Directorate of Technical Education and School Life [DETVS]/ MENFP).
- The Emergency Education Program recommended the establishment of a system that would allow personalized tracking of students and would provide support to students encountering troubles. This system aimed to reduce school dropout and repetition. The Emergency Education Program, through the “million schoolbags operation” distributed school kits with textbooks (recycled), pens, slates, etc.
- Recently, MENFP introduced new modules of reading at secondary schools as part of USAID’s Improving Training for Quality Advancement in National Education (ITQANE) project.

In addition to these experiences, there are other initiatives that have been launched by socioeconomic entities and civil society organizations. However, these initiatives are still conducted on a small scale without being generalized or supported, and most initiatives have targeted literacy among older individuals or improving remedial skills of students. Teaching the basic elements of reading seems to remain the responsibility of preschool, for which there is a curriculum and a teacher’s guide. However, access to preschool education, depending largely on private initiative, is limited and not universal. For the year 2012–2013, the gross rate of enrollment in preschool was 60 percent in all types of preschool institutions (traditional, modern, public).⁹

It is within the context of this movement aimed at promoting reading in schools initiated by these different studies and actions, that USAID and the MENFP have launched this broad study. This component concerns the second topic, analyzing the contribution of preservice teacher training in preparing teachers to teach reading in Arabic.

⁹ Ministère de l’Education Nationale, Direction de la Stratégie, des Statistiques et de la Planification, Division des Etudes et des Statistiques [National Ministry of Education, Directorate of Strategy, Statistics, and Planning, Division of Studies and Statistics] *Recueil statistique de l’éducation [Record of Education Statistics] 2012–2013*.

1. Introduction

1.1 Introduction to the Moroccan Education System

Teacher training in Morocco has undergone a number of important changes since independence in 1956. The most recent change is the integration of primary and secondary teacher certification under one institution known as the Regional Center for Professionals in Education and Training (CRMEF). Between 1956 and 1999, 34 Teacher Training Centers (CFIs) were established across the country. They operated in conjunction with the Regional Center for Pedagogy (CPR) specific to the training of middle school teachers, the first of which opened in 1970. Finally eight normal schools (ENS), whose mission was the training of secondary school professors, were opened after 1978. Several other institutions designed to train professionals and inspectors were set up at the same time, resulting in a large network of training institutes for the education sector.

Before the creation of these institutions, a primary school's teacher was recruited directly from among individuals who had completed primary school. The creation of the CFI at the end of the 1960s allowed for a rapid "Moroccanization" of professionals in primary education; that is, to replace foreign teachers by Moroccans through training programs. The CFIs continued to furnish primary school teachers in Morocco until 2012. In 2012 the CRMEF was created to regroup all teacher training. The creation of the CRMEF was done in the context of the reforms in teacher training stipulated by the Emergency Education Program and earlier according to the CNEF. This desire to regroup all of the teacher training institutes was based on the idea of creating a professional certification for teaching; that is, to limit the total amount of time of the training program and focus on certification. Another objective of the reforms was to ensure that each region would have one harmonized and unified training institution.

The CRMEF were created after an analysis of the problems and dysfunctions of the CFIs, CPRs and ENS, including the following (Dali, undated):

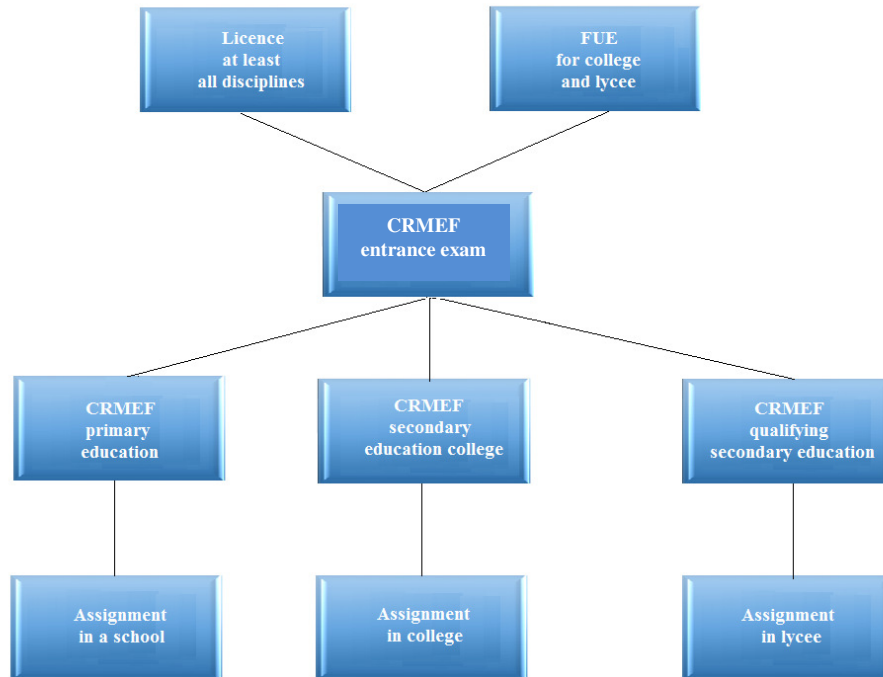
- Outdated and short training programs
- Scattered resources
- Absence of research structures and institutes for training school heads and teacher trainers
- A large diversity of prerequisite diplomas (Bac, DEUG, License), and training that was either too specialized or too superficial and not contextualized
- Training curriculum based on content and not on competencies

The ENS were associated with higher education, per the recommendation of the CNEF. The reform unified the entrance profile of prospective teachers based on a minimum level of education (License minimum), and it concentrated training in one single institution. The current roadmap for becoming a teacher in Morocco is illustrated in *Figure 1*, below. The minimum qualifications are now that the teacher candidate:¹⁰

¹⁰ There is also the unstated assumption that the person conforms to basic physical requirements such as not being significantly hearing or visually impaired.

- has at least a “License” or equivalent;
- passed the entrance examination given every year by the MENFP;
- fulfilled the year of training; and
- accepts the post that the MENFP assigns him or her to.

Figure 1: Entry Path for Primary Teacher Profession



Even though the requirements for access to the CRMEF were harmonized to require at least a bachelor’s degree (License), this still allows for significant diversity in the profiles of candidates based on the field of study (literature, science, math, law, economics, management, etc.). However, it is not a requirement to have completed the program of study at the university in what are known as the “university education studies track” (FUE), even though this is where basic studies education and pedagogy are introduced.

This diversity has an impact on the prerequisite knowledge that teaching candidates have, and therefore also on their preparedness to teach reading—the subject of this study. It is important to note that the certification training given in the CRMEF is based on the assumption that the candidates have already had a solid basis in subject training at the university level through the FUE, including the following:

- Their subject of study and interdisciplinary studies
- The pedagogy of these subjects of study and education science

- Techniques of communication and use of information and communication technology (ICT)
- Education research methods

This is why the decision was made to limit the theoretical portion of initial training at the CRMEF to 40 percent of total training hours, and to focus it on qualifications for being a teacher, with the remainder of the time spent on practical school-based training. It is in this context that this study was undertaken, specifically to understand how teachers are prepared to teach reading in primary school within this process. To respond to this challenge, a research team led by Moroccan experts adopted a methodology for data collection and analysis, in addition to document review. This methodology, described in more detail in Section 1.3 Methodology, combines qualitative and quantitative data collection and targets a range of actors who are involved in initial teacher training for primary school teachers.

1.2 Purpose and Objectives

Financing teacher training is one of the most important investments that a country can make to improve results in the education sector. In the United States, research has shown positive correlations between the level of teacher training and student outcomes. However, the benefits aren't just measured in terms of student outcomes—there is also a positive relationship between training and teacher retention.¹¹ Other comparative studies between countries where international assessment results such as PIRLS are among the highest confirm that these relationships are not unique to the United States.¹²

As explained in the preface to this study, this report is one of three undertaken in the context of a situation analysis of reading in Morocco. Across these three studies, USAID and the MENFP aimed to study in more detail a few of the factors that favor or harm acquisition of reading in the early grades, namely:

- A review of curriculum and learning materials (reading textbooks, teachers' guides)
- This study on initial teacher training and reading
- An analysis of the perceptions and attitudes of teachers and how they influence practice

The starting point of this research on initial teacher training was the three following research questions:

1. Does the official teacher training curriculum (theoretical and practical) take into consideration recent evidence on how children learn to read in Arabic?
2. What methods for teaching reading do future teachers learn? How are they taught during initial teacher training?
3. Are teachers sufficiently prepared (in quality and duration) to teach reading in Arabic?

¹¹ National Council for Accreditation of Teachers (NCATE). *What makes a teacher effective? What research says about teacher preparation*. Available at: <http://www.ncate.org/LinkClick.aspx?fileticket=JFRrmWqa1jU%3d&tabid=361>

¹² Stoel, C. F. & Thant, Tin S. (April 2002). *Teachers' professional lives: A view from nine industrialized countries*. Council for Basic Education with support from the Milken Family Foundation.

It was especially important to understand if reading instruction is taught **explicitly** (with its own specific pedagogy based on age and required competencies), or if it is taught as an **implicit** skill (i.e., part of learning the Arabic language), and if the time allocated to the pedagogy of reading instruction is sufficient.

The study targeted analysis of the official teacher training program, by first observing the way in which the program is translated into instruction across the different CRMEF, and then by observing how teachers are capable of applying that theory in the classroom.

The study looked specifically at the way in which the curriculum addresses the subject of reading in the first three years through:

- initial knowledge and theoretical coursework;
- applied coursework;
- practicum/role play; and
- design of the training curriculum.

A secondary objective was to determine whether the current system includes the possibility of developing specialists in reading instruction in the early primary grades, and if not, then what might be the entry point for encouraging and supporting their development in the future while at the same time improving the way the subject of reading is addressed in initial teacher training. For example, the study looked at whether teachers have some autonomy within which they can adjust the standard curriculum to suit the needs of their students; whether they have the freedom to develop their own programs; and whether the current norms and values would support such changes in official curricula and methods.

The expected result is to put in outline strengths and weaknesses in the current system and the degree to which teachers are adequately trained, with the ultimate goal of providing USAID and MENFP with practical recommendations for informing their reform and support strategies in the future.

1.3 Methodology

The research period for this component took approximately three months from start to finish, with the main part of the field work taking place over two weeks (April 28 to May 8). In order to achieve the objectives of the study, three methods were adopted:

- Document analysis
- Qualitative data collection
- Quantitative data collection

Document analysis included the following:

- Official documents (official teacher training curriculum in the CRMEF and associated coursework; primary school curriculum and materials; reading curriculum and teaching materials for Grades 1 to 3; documentation in the CRMEF)
- Official documentation from the FUE for Arabic language
- Literature on teacher professional competencies, including those specific to reading instruction (see list of references, *Annex I*).

Qualitative data collection was carried out on the basis of interviews and focus groups with a list of key informants composed of stakeholders in initial teacher training (trainers in Arabic language and education science, mentor teachers, teachers in training, graduates of the CFI and CRMEF, directors of Central Unit for Pedagogic Research of the MENFP [UCRP] and Regional Center for Teaching and Learning Resources and Events [CRDAPP]). The researchers visited two CRMEFs—Marrakech and Rabat—to observe the premises, visit the libraries, and see other resources provided to the teachers in training. However, it was not possible to observe classes being given in the CRMEF because the research was undertaken at the time when teachers were in practicum in nearby schools. Other data were gathered in Marrakech, Rabat, and Khémisset by observing these teachers during practicum sessions of reading lessons for Grades 1 to 3, using a classroom observation tool that allowed observers to record teachers' actions and methods.

Other quantitative data collection was done with the help of an online questionnaire targeting directors of the CRMEF and trainers of Arabic and education sciences. Unfortunately, the response rate was low for this online survey, despite efforts to reach out to institutions and provide them with specific guidance for filling out the questionnaire. This lack of response is most likely due to:

- the change in direction in the CRMEF the day that research was scheduled to begin;
- the research taking place at the end of the year, when directors and trainers have a heavy workload and competing priorities, such as end-of-year exams; and
- difficulty in accessing or understanding the functioning of the online survey.

To allow for comparison of information collected in this study and the third study on teacher attitudes and beliefs, data were collected for the two studies simultaneously and were limited to two Regional Academies for Education and Training (AREFs). These were chosen based on geographic criteria, mix of urban and rural schools, languages spoken, and proximity to the capitol and other USAID interventions. The final decision was reached in accordance with MENFP to do the research in the two AREFs of Rabat-Salé-Zemmour-Zaer and Marrakech-Tensift-AlHaouz.

Some factors that limit the quality, completeness, and ability to generalize the results of the research include the following:

- There was a very short time period in which to complete the research (3 months total).
- The end-of-year period in which the research took place may have an effect on the extent to which some observations are representative, as well as overall availability of key informants.
- The AREFs were also preparing for the end-of-year school leaving exams (Bac), so some officials were hard to reach or unavailable.
- The directors of the CRMEF had just been nominated and were in the process of transitioning into their posts.
- The training year in the CRMEF was particularly short this year because of a significant delay in scoring entrance exam results and selecting the candidates.

- The online survey generated a low response rate (mentioned previously).

On the other hand, despite these constraints, the individuals who were contacted for this research did their utmost to be available and to facilitate necessary contacts, starting with the central ministry services, such as the National Center for Teaching Innovation and Research (CNIPE)/Central Unit for Civil Service Training (UCFC) and the Directorate of Curricula (DC).

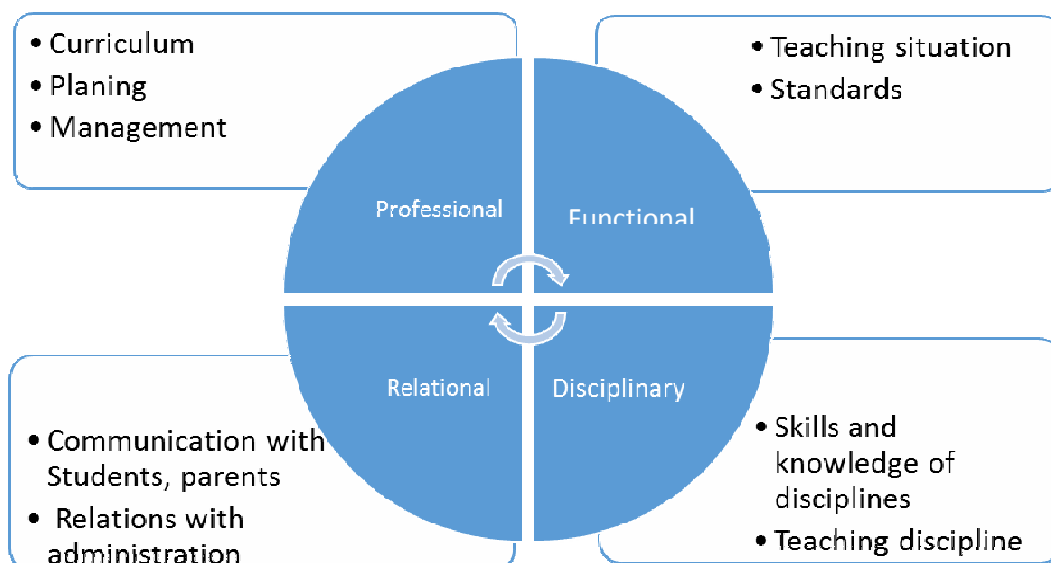
1.4 Conceptual Framework

The research questions, data collection tools and of course, the recommendations are made on the basis of a conceptual framework established from international experience in teacher training in general, and teacher training in reading instruction specifically. It is difficult to focus solely on the latter without also sufficient attention to the former, since it is rare to find a primary school teacher who is only responsible for reading, without teaching other skills and disciplines throughout the day; this is the nature of the primary school teacher position. There are many academics and specialists who have written extensively about teaching competencies and teacher training programs. These different conceptual frameworks and taxonomies differ in their degree of specificity, but can be grouped into four major categories, which have been selected to guide this research:

- Professional skills
- Functional skills
- Interpersonal skills
- Subject-matter skills

Figure 2 summarizes these categories while emphasizing their interdependence and the cyclical nature that initial teacher training should adopt. This illustration is followed by further details about each category, before **Figure 3** presents the way in which reading fits into these categories of training.

Figure 2: Categories of Teacher Training



Professional skills

In this category are the professional competencies that a teacher needs to have to fulfill the task of teaching effectively and responding to the learning needs of students. These professional skills, described by Perrenoud (1997), are found elsewhere in the literature and represent a consensus among specialists that if they are well developed, they constitute the characteristics of an effective teacher:

- Organize and facilitate learning opportunities
- Manage the progression of learning
- Develop and enhance methods of differentiation
- Involve children in the learning process
- Work as a team
- Participate in school management
- Use new technologies
- Manage one's own professional development

This category encompasses the need to understand the curriculum, as well as relevant laws, standards, and procedures related to the teaching profession.

Functional skills

Future teachers may be assigned to areas that are rife with difficulties, in particular large classes, multigrade classrooms, rural and satellite schools, and classrooms for children with special needs. If teachers are not trained to manage the specific teaching challenges linked to these characteristics, it is unlikely that they will be able to provide effective instruction to all of the children equally. The teacher preparation curriculum and specific modules must draw attention to these factors and provide teachers with appropriate strategies for diverse contexts. Managing these challenges requires training adapted to the background of the trainees that also takes into consideration and values their pre-existing experiences. Furthermore, to be effective, teachers cannot be treated as though they are autonomous professionals working in isolation within their classrooms. The functional competencies also touch on the need to learn how schools function, the roles and responsibilities of all stakeholders, and particularly how to encourage and benefit from collaboration between colleagues for the good of the school's development as well as the child's.

Interpersonal skills

Educational research points to the importance of an instructional environment that is suitable and where the roles and relationships between teacher and student are clearly articulated.¹³ The notion of the "learning contract" appeared in the domain of education in response to the need to articulate the roles of the teacher and the student in a precise way for a given learning situation.¹⁴ Managing multiple interactions in the course of a lesson depends on an appropriate delegation of roles in the context of this specific, fair, and equitable interpersonal agreement. Not only do teachers need to know how to maintain order in the classroom, but

¹³ Tardif, J. (1992) *Pour un enseignement stratégique: l'apport de la psychologie cognitive* [Toward strategic teaching : The contribution of cognitive psychology]. Montréal, Québec: Editions Logiques.

¹⁴ Brousseau, G. (1998). *Théorie des situations didactiques* [Theory of didactic situations]. Grenoble: La pensée sauvage.

they should also know how to communicate at the level of the child, while they seek to understand each child's specific background and needs. Furthermore, the teacher should be able to engage in a relationship with the parents. Therefore, in the category of interpersonal skills, the language of instruction, the language spoken/understood by the child, and the language of communication with the parents is an important element of success. The more differences there are in the languages spoken at each stage, the more important it is for teachers to learn strategies for bridging the communication gaps.

Keep in mind, for example, that the Massar program that has been put in place by the MENFP/CNEEO is a system for tracking school performance for children from the time they enter school until they graduate from secondary school (the baccalaureate level). It allows teachers to provide information to parents so that they are also informed of their children's progress. This new system will require teachers—old and new—to enter into a completely new type of relationship with parents.

Subject matter skills

Finally, and perhaps most obviously, teachers need to be competent in the subject matter that they will be teaching. A teacher who does not know how to add or subtract will hardly be able to teach someone else that skill. The same goes for reading; however, to teach reading it is not enough to know how to read, or even to have an advanced degree in linguistics or literature in the language of reading. This is why literature (Shulman, 1985, for example) distinguishes between three types of teaching skills:

1. Pedagogical knowledge, which includes some of the teaching strategies and behaviors already cited above, which are independent of any specific subject area
2. Content knowledge, or a deep understanding of the subject
3. Pedagogical content knowledge, or the way that a specific subject should be taught

This third aspect is very important in initial training, because this is where future teachers learn how to make content accessible to the student, to align teaching with the child's mental representations, to appropriately choose the sequence and progression of skills to be taught and the tools or strategies to use at each stage.

With regards to reading instruction in Arabic in the early grades, content knowledge training should result in:

- full mastery of the Arabic language (spelling, pronunciation, word morphology, grammar, etc.);
- knowledge of the psychology of the child and the way in which each person learns to read for the first time (the “mechanics” of the language),¹⁵ including phonemic awareness, alphabetic principle, vocabulary, fluency, and comprehension;¹⁶
- understanding of how to teach Arabic to children; and
- strategies for using language to communicate in different ways.

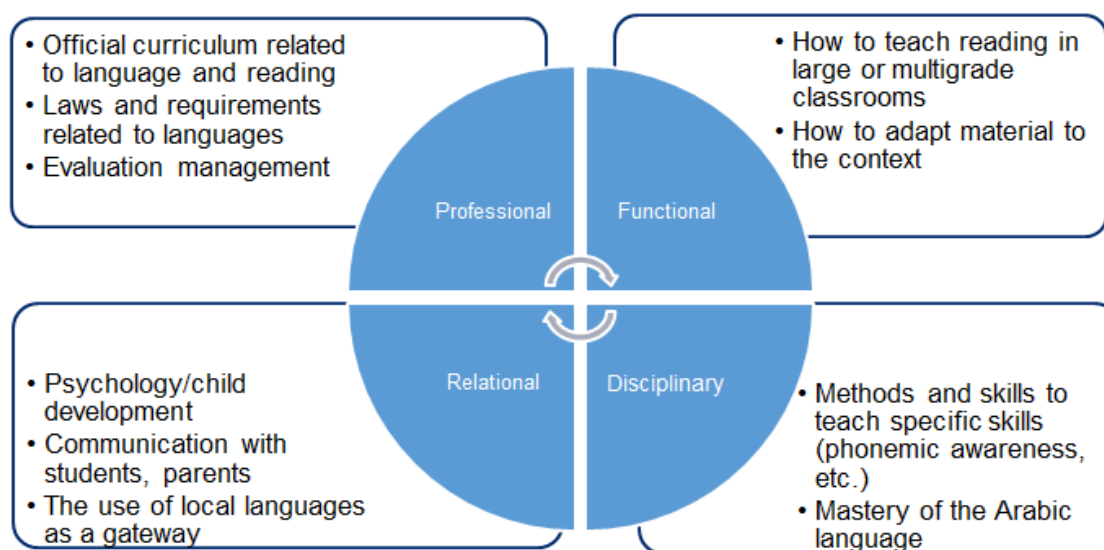
¹⁵ It is not sufficient, for example, to know how to teach Arabic as a foreign language to adults. Even if the content knowledge is the same, the pedagogical content knowledge is very different.

¹⁶ The 5 components of reading. See RTI International, EGRA Toolkit (2009).

Moreover, in the Moroccan context, it is important that teachers learn strategies for dealing with different native/colloquial languages and different levels of ability among children in their class, as well as how to support the transition between native languages and MSA.

To summarize, although the theoretical framework is based on four competency domains that apply across all key subject areas of teaching, within each domain it is also possible to target subject-specific knowledge and skills for reading instruction. Naturally these will mostly be concentrated in the “Subject” category, but not exclusively. **Figure 3**, below, uses the same structure as **Figure 2** but replaces the bullet points with non-exhaustive lists of skills specific to reading instruction.

Figure 3: Categories of Teacher Training Related to Reading Instruction



Knowing what teachers need to know and be able to do is one thing, but what do research and experience tell us about the most efficient methods and models for transferring these skills to future teachers through initial training?

Many different models exist from country to country, but in general, initial teacher training consists of two parts: (1) a certain period of general theoretical studies; and (2) a period of training certification, after which an individual is authorized to teach in the classroom. This second part usually includes a period of clinical practice in a classroom with a mentor teacher. These two parts may follow one after the other (the “consecutive” model), or they may take place at the same time (the “concurrent” model). In Europe, for example, the concurrent model is the most common for the preparation of primary school teachers, whereas the consecutive model is used more often for teachers at middle- or secondary-school levels.¹⁷ The total duration of teacher training in European countries is 3 or 4 years, of which half of that time is considered the certification component. In some countries such as Finland, the total duration of training can be up to 5 years after secondary school graduation.

¹⁷ Education, Audiovisual, and Culture Executive Agency of the European Union (EACEA) (2009). Indicators on initial teacher education. Eurydice Key Data Series:Brussels.

Another important element is recruitment, and how the system attracts—or not—the best-qualified candidates into primary school certification programs, and what pre-requisite knowledge is required. In some countries it is common for the most qualified candidates (for example, those with a secondary-school diploma) to be placed at middle- or secondary-school level, while primary school teaching may be done with only a primary-school certificate. Similarly, in some countries the expectations for promotion or career aspirations are to move from primary to secondary teaching, then to educational administration; however, the goal should be to recruit and retain teachers who have the most experience at the primary school level—the level that will define success for children in the later years.¹⁸

Finally, an element that emerges as particularly important is to have sufficient time for guided practice, either in actual classrooms or in a training institution by way of group work or microteaching.¹⁹ Lampert (2006) suggests a continuum of practice situations ranging from virtual (technology enabled) to contrived (microteaching) to real (classroom based).²⁰ Within this continuum, the teacher in training can gain experience first in “low-risk” conditions before perfecting strategies and behaviors with actual children. These practical training environments must include a significant amount of observation, reflection, and practice with immediate feedback from an experienced mentor. This clinical practice can be in nearby public schools, or in schools associated in a formal way to the training institution. The latter model is a practice that has gained increasing support in the United States, and the schools are known as “professional development schools.”²¹ In these schools the most experienced teachers work extensively with trainees in classrooms, but also contribute to training in the institute. In this way, there is a continuous exchange between the academic and applied experience that is mutually beneficial for the evolving teaching curriculum and methods.

To summarize, initial teacher training for primary school should:

- be of sufficient duration;
- be based on a policy of recruitment that encourages broad study of education in the first place followed by teaching certification in such a way as to make primary school teaching a desirable professional career; and
- include a sufficient amount of time for practice and reflection on practice.

In fact, experts are increasingly advocating that teacher training be done in a manner similar to medical training in the importance that is given to guided clinical practice and rigorous selection and entry requirements.

¹⁸ The work of Dr. Aiden Mulkeen is a useful reference for teacher policy decisions, including recruitment and training. See, for example, *Teacher policy in primary and secondary education in development cooperation*. Discussion paper on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). February, 2013.

¹⁹ Ball, D. & Foran, F. (2009). The work of teaching and the challenge of teacher education. *Journal of Teacher Education*. 60(5): 497-511; NCATE; Schorr, J. (2013). A revolution begins in teacher prep. *Stanford Social Innovation Review*. http://www.ssireview.org/articles/entry/a_revolution_begins_in_teacher_prep

²⁰ Lampert, M. (2006) Designing and developing a program for teaching and learning teaching practice. Paper presented to the secondary teacher education program faculty, University of Michigan, Ann Arbor. Cited in Ball & Foran, 2009.

²¹ NCATE; Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco: Jossey-Bass.

With regards to preparing teachers to teach reading in the early grades, the content knowledge and pedagogical content knowledge as well as practice must be included in an explicit and deliberate way along with the above components. This means that the total duration of training should be long enough to allow for literacy development to be a distinct subject of study.

In the next part we present the findings of our research into the way in which reading instruction is included in the pre-service teacher training process via the CRMEF in Morocco.

2. Results

2.1 Teacher Recruitment and Initial Teacher Training Curriculum

University-level education programs

As explained earlier in Section 1.1, all potential teachers who enroll in the CRMEF must show that they have at least a bachelor's degree (License) or the equivalent. The university education specializations (FUE) were created, according to Dali (2012), to “take advantage of the richness and the diversity that the university can offer to future teachers,” and therefore the content of the training, which lasts for 3 years, is “centered on education science and pedagogical techniques.” Despite this focus, the CRMEF entrance examination is open to anyone who has a bachelor's degree, and the education specialization is not a requirement. According to graduates of the FUE who were interviewed for this research, most graduates of the FUE have the option to go on to become teachers after passing the entrance exam and course completion at the CRMEF; however, this year (2013–2014) there were only two who chose to do so. Other graduates of the FUE prefer to teach at the middle-school or secondary-school level or to go into teaching specific content areas.

The qualitative portion of the research found that most teachers who were surveyed were graduates of scientific or “other” programs. The explanation is that those who completed an Arabic language program of studies were eliminated from admission because of poor math and French skills. On the other hand, the consequence is that many teachers in training have poor MSA skills, and thus they revert to colloquial Arabic (Darija) during instruction (observation by the research team; more on this subject follows).

Table 1 below shows the breakdown among teachers who were surveyed in two CRMEF/AREFs by type of diploma (self-reported).²²

²² Unfortunately the UCFC was unable to provide us with official statistics on the profiles of practicing teachers. This information would have to be compiled based on data from the CRMEF, which was not possible to do in the time of this research, and also given the concurrent turnover in CRMEF management.

Table 1: Teachers' Highest Level of Education completed and Specialization

	Teachers in training (n=23)	In-service teachers (n=181)
Teachers' highest level of Education		
Secondary school diploma (BAC)		50%
Associate degree (BAC+2)		9%
Bachelor's	96%	35%
Master's	4%	1%
Specialization		
Islamic studies	4%	9%
Sciences	17%	31%
Arabic language	13%	44%
Other	65%	16%

Data from teacher questionnaire.

The table shows that teachers in training have the required level of a bachelor's degree that is the minimum for admission to the CRMEF. However, for in-service teachers, half have only the secondary school diploma—these are older teachers who were recruited prior to the current requirements. We also see that there are many types of specialization among current teachers in training, with a majority in the “other” category (65 percent). Arabic language and Islamic studies represent only 17 percent of respondents. This is important to note only because, as explained in Section 1.4, disciplinary studies in initial teacher training must include content knowledge and pedagogical content knowledge. For primary school teachers responsible for teaching children to read in Arabic, the content knowledge—spelling, morphology, pronunciation, etc.—is very important. As will be discussed in the sections that follow, the period of teacher certification training is not long enough to ensure that all teachers have sufficient content knowledge in all of the subject areas of primary school. Therefore, it can be assumed that teachers who come from Islamic studies or Arabic language studies will have at least a slight advantage compared to others because they will have stronger language content knowledge, if not necessarily stronger pedagogical content knowledge. This assumption would need to be confirmed through additional research.

The researchers reviewed documentation in the FUE for the Arabic language subject specialization to see whether these university programs are able to prepare teachers to teach reading. The main focus of study in this program encompasses literary genres, linguistics, and education. Key components of the program are the following:

- Concepts and techniques for analyzing poetic and narrative texts, and literary and educational genres
- Methods of communicative approaches in language, linguistics, and expression
- Methods of teaching Arabic language and literature
- Research and communication tools
- Educational psychology and teaching
- Micro-teaching
- Practicum
- Research in literary genres and education

The above subjects of teaching Arabic in the FUE do not explicitly address reading, for example, as one of the communicative approaches, nor do they address reading in the early primary years.

CRMEF curriculum

A curriculum for initial teacher training in the CRMEF (COFI)²³ was designed to propose an alternative to the limitations observed under the previous system. These limitations include:²⁴

- Inequalities in geographic coverage and the quality of the program
- Absence of permanent and organized research
- No separation between training and recruitment
- Absence of a national structure of training of trainers;
- Absence of coordination with the university
- Short duration of training (6 to 7 months);
- Insufficient time for practical training
- Outdated training methods
- Low acquisition of academic content
- Insufficient pedagogical training
- Late initiation to the challenges of the profession
- Default choice of profession
- Recruitment without training, in some cases

The introduction of CRMEF and new theoretical and practical programming was meant to correct some of these limitations. The portion of theoretical training was meant to be done through the university via the FUE. Students who enter the CRMEF are not necessarily graduates of the FUE, however, which calls into question whether a mere certification program will be sufficient. The practical training portion remains the mission of the CRMEF through a certification program that is based on four cross-cutting competencies:

- Planning
- Management
- Evaluation
- Education research

These four competencies are taught across five different modules:

- Science of education
- Research and project
- Legislation and ethics of the profession
- School community
- ICT

²³ We use the term COFI as a convenient acronym that comes from the French translation of the Arabic document—*curriculum de formation initiale*. This is not an official acronym though.

²⁴ Dali, 2012. La réforme de la formation initiale des enseignants [Reform of initial teacher training]. Ministry of National Education and Vocational Training/Central Unit for Civil Service Training.

These are complemented by other elective and subject-matter support modules left to the discretion of the trainers. The subjects to be taught are distributed over the course of the year (7 to 9 months) in stages. With reference back to the conceptual framework in Figures 2 and 3 we see that the competencies covered by the certification curriculum encompass mostly the professional and functional skills, with less attention to the relational and subject-matter skills.

For the purposes of this research, the objective was to look specifically for the points where the subject of reading in the early grades is addressed within the curriculum framework. More detail is provided in **Table 2** below, which summarizes the subjects taught and the number of hours allocated to each subject.

Table 2: Table of Subjects and Hours in the CRMEF Curriculum

LP	Lesson planning	ER	Education research
LM	Learning management	SMR	Initial training support (subject matter review)
LE	Evaluation of learning	ICT	Information and communication technology
AMA	Amazigh	LMP	Legal and moral aspects of the profession
P	Preschool	MG	Multigrade classrooms
OP	Optional (electives or coursework designed at the discretion of trainers)		

The numbers in the table represent the scheduled number of hours.

LP	LM	LE	ER	SMR	ICT	AMA	LMP	P	MG	OP
Step 1 : Observing the start of the school year										
			16	18	4	8	2			
Step 2 : Collecting information necessary to prepare lessons										
4			4	6	4	4	4			
Step 3 : Lesson planning and management										
10	60	2				6				
Step 4 : Management of a lesson in a given subject area (language, science, humanities)										
2	60	6				6			4	
Step 5 : Management of a lesson and evaluation of learning										
2	20	6	8		8	6	12	12	4	
Step 6 : Management of learning activities in preschool										
2	20	2	4		4		4	10		8
Step 7 : Management of individual differences (children with specific learning needs)										
2		2	8		8	4	8		12	8
Step 8 : Management of lessons in multigrade classrooms										
2	20	2				2				
Step 9 : Managing classes with teachers in training										
	20	4				2				

Source: Table adapted by authors from data provided in documents from the UCFC..

Analysis of the above table suggests that reading is not a separate subject area, but is only integrated alongside other primary school subjects, almost arbitrarily across the different stages (steps). For example, during Steps 3 and 4 of planning and management of a lesson, the teacher in training certainly has a chance to learn something about teaching reading, but the

number of hours for such training is not specified. The analysis of the difficulties that children have in learning to read and cognitive psychology related to reading are not incompatible with the four competencies targeted by the curriculum. While covering these four competencies, examples are presented and discussed related to reading, particularly how to plan, manage, and evaluate a lesson, as well as being attentive to difficulties that children may have and strategies for addressing them.

Also, it is important to note that the component for supporting initial subject studies consists of only 24 hours in which three subject areas need to be covered—Arabic, French, and math. These 24 hours are divided among these topics at the discretion of the trainer according to the needs he or she identifies; however, if we assume even distribution then there may only be 6 hours allocated to the teaching of Arabic (language and literacy) provided by an Arabic language instructor. On the other hand, there are 42 hours for the Amazigh language.

The objectives of the module on initial subject-matter strengthening in Arabic are:

- to allow teachers in training to master the academic knowledge base;
- to transfer these competencies to the teaching qualification (*données de qualification*);
- to master resources that aid in teaching Arabic in the first 6 years of primary school
- to understand, analyze, and make use of texts; understanding, analysis and exploitation of texts; and
- to achieve functional mastery of Arabic.

Explicit strategies for teaching reading in the early grades (neither the subject [phonemic awareness, alphabetic principle, etc.] nor the pedagogy of the subject) are not present in these objectives. The study of the curriculum and textbooks was the subject of another study in this series; however, this study on initial teacher training can't ignore these elements, which are related in important ways to teacher preparation. First of all, regarding the primary school curriculum and the place of reading within this curriculum, one important thing to note is the way in which the expected progression of skills in reading are expressed in an extremely simplified manner, as follows (according to documentation from the Ministry of Education Curriculum department):

“The learner” will produce orally [it is assumed that this means by reading aloud] in a meaningful communicative situation, a text of:

- three sentences in first grade;
- four sentences in second grade; and
- five sentences in third grade.

The only requirement that changes from one level to another is the number of sentences to produce—that is the extent of the performance standards required at the end of each school year in the three first grades (this is with reference to the primary-school curriculum). Similarly, the word “read” or “reading” is not used at all in the initial teacher training curriculum. How are these performance standards observed in reality and especially in the practical lessons given by the teachers in training? If the performance standards are so poorly articulated in the curriculum, it is not surprising that they are also not the focus of teaching in

the initial teacher preparation curriculum, and that there is not a well-developed subject-specific pedagogy.

As a result, a large majority of the preparation teachers undergo to teach reading is done during the practical component of teacher training, and so it is very dependent on the pedagogy and the content of the textbooks used in the classroom. Therefore, it is important to understand the findings of the textbook analysis because the textbooks are largely, if not exclusively, used during classroom practicum. Furthermore, the review of the textbooks should be a part of the coursework during the theoretical component in the CRMEF. Each CRMEF visited had a documentation center with a range of reference materials, including textbooks for all subject areas. However, our research did not uncover the existence of a detailed study of textbooks as part of the initial training program. This may be because it is only at the beginning of each school year that the manuals used by each delegation are chosen. The books used in the classroom are dependent on this choice, but without input from the teachers or school directors. Concerning the content of the reading textbooks, interviews repeatedly indicated that teachers in training, mentor teachers, and teacher trainers find them too difficult, abstract, and not very interesting for children (for more details, see the Component 1 report). According to interviews, in order to make learning to read easier for students, reading texts need to reflect the students' life and environment, though most often this condition is not satisfied in the current textbooks. The content of school textbooks are usually very long, difficult, and make use of a high number of abstract words (this is the conclusion reached by informal analysis conducted by teacher trainers year after year but confirmed by the third component of this research program).

To sum up, these analyses show that reading is not a specific concern in initial teacher training. It is considered only within the series of training activities aimed at learning four skills: planning, management, assessment, and educational research. However, the recent body of knowledge around reading instruction, something so fundamental for children in the early grades, concludes that learning to read requires mastery of specific, teachable skills that teachers must learn to teach. In Morocco, it is only during the school-based component of teacher training that future teachers are exposed to reading in a specific manner though, for example, preparing reading lessons; the risk is that there is a gap or even a contradiction between what happens in the classroom and what is espoused in the training institute. In the following sections, we will discuss in detail the contents of these two trainings: theoretical and practical.

2.2 Initial Teacher Training

Arabic reading is addressed in initial training of primary-school teachers during training in the four key areas of the curriculum (planning, management, assessment, and educational research). How is it practically done? What are the problems faced? What do trainers suggest to solve these problems?

The training curriculum in CRMEFs is delivered in two parts, one is theoretical and the second is practical, at a proportion of 40 and 60 percent, respectively. The survey of teachers in training asked them to give their opinions on the utility of each of these parts. *Table 3* provides the answers (n=23) to the question of how useful each component was.

Table 3: Contributions of the Initial Training Components

Usefulness	Formal Training (%)	Practical Training
Not useful	30%	17%
Somewhat useful	30%	22%
Useful	35%	48%
Very useful	4%	13%

Data from teacher questionnaire.

Whereas teachers are divided on the usefulness of the formal training, a substantial proportion find the practical training to be useful or very useful. The theoretical training could be improved in order to make it more useful to reading instruction in the early grades. The fact that only 4 percent find theoretical contents “very useful” requires further analysis. Trainers are divided on the question of the relative importance of theory and practice. Indeed, among online questionnaire respondents ($n = 12$), 4 gave more importance to theory, another 4 gave more importance to practical training, and the remaining 4 had no opinion.

Next, we will examine in more detail the content and methods of theoretical training before proceeding to the analysis of methods used in practical training.

Theoretical training

As explained in Section 2.1, CRMEF trainees have different educational levels and diversified backgrounds (schools of arts, sciences, law, economics; institutes of trade and management; etc.); some of them have teaching experience in the private sector. In order for the subject matter training to truly prepare teachers for the school-based component, the teaching of languages and other disciplines should at minimum focus on the following:

- Improving content knowledge of the subject
- Introducing trainees to the *pedagogical content knowledge*

According to interviews, all Arabic teacher trainers, being aware of the importance of reading instruction in the primary grades and what it entails in terms of preparation during the initial teacher training, find that the 24 course hours dedicated to strengthening training in basic subjects (languages, mathematics, science, and humanities) including 6 hours dedicated to Arabic (reading, writing, literature), are not sufficient to fill the knowledge gaps in Arabic language with which students arrive, let alone develop pedagogical content knowledge.

According to the interviewed teacher trainers who responded to the online survey, 40 percent of them spend less than 10 percent of their time on brushing up the knowledge of preservice teachers. Otherwise, time is divided almost equally between “specific didactics to each subject,” “general pedagogical knowledge,” and “classroom management,” which occupies 25 percent, on average, of the teaching time. In general, even if these trainers believe they must directly apply the official training curriculum, there exists a lot of variance between them in the importance they give to different subjects.

The student and his/her learning strategies constitute the fundamental focus of training for trainers of educational sciences. This work begins with an understanding of the child and his/her problems and difficulties and then aims to find answers in the body of knowledge of the discipline. In this systematic approach, there is no doubt about the need for a variety of theoretical subject areas in initial training, notably psychology and particularly cognitive psychology. Yet these subjects are also not covered by the initial training curriculum.

However, some educational science trainers at their discretion refer to cognitive psychology because of its importance of understanding the challenges and successes of pupils in reading.

The skills on which COFI is based and, especially, the way the skills are taught and the way trainees appropriate them lead to the acquisition of technical skills in the fields of planning, management, and evaluation. According to the teacher trainers interviewed in the focus groups, these do not enable them to think, argue, justify, step back, and think critically; such capacities are considered essential for understanding the teaching profession and exercising it properly. These technical skills are reinforced by the way the didactics of subjects are used (languages, mathematics, science, and humanities) at the expense of the psychology and sociology of education. This gap in pedagogy by reflection is not a result of a lack of will—the trainers who were surveyed online were unanimous on the statement: “We encourage preservice teachers to have a critical view of the curriculum and methods and to find explanation to ‘why’ and ‘how’” and also on the question of innovation: “We encourage preservice teachers to innovate and seek new didactic approaches in reading instruction in Arabic.” It seems that it is rather a question of curriculum and training hours that do not provide a good framework for this kind of methodology.

According to one of the group interviews with teachers of educational sciences, the creation of the CRMEF is associated with a positive change in the teaching methods in the center: group work, workshops, hypothetical situations (الوضعيّات الافتراضية), and the trend towards practice rather than theory. Researchers were unable to observe the lessons at CRMEF, but the trainers who responded to the online questionnaire indicate that the setting of the context (work situation), group work, and analysis of practices are common methods. “Group work” is a practice widely used in CRMEFs, according to the discussions with the trainers and in the experience of the authors outside of this study. It involves inviting trainees to prepare and present courses on particular aspects of the training. This is, generally, done by two or more trainees. Micro-teaching is conducted in a CRMEF equipped with a room dedicated to this. In this case, a trainee prepares and gives a lesson and the other trainees play the role of students. Such “contrived” practice is less common. What trainers and teachers in training over the course of this study expressed a desire for was recording (video) all courses delivered during the school-based component in order to analyze them in CRMEF classes (using established reference models). This resembles what is referred to in the introduction as “virtual practice.” They want the work situations to be real and not merely role play, like micro-teaching. However, they say it is difficult for them to find time to effectively manage and make use of videos.

Also, all preservice teachers are required to submit an end-of-study project on one of COFI’s four skill areas. The area of educational research consists of two parts:

- An introduction to method and tools of educational research (by the Professor of Educational Sciences)
- The completion of an end-of-study project of an educational nature on a subject chosen by a team of two or three preservice teachers and supervised by a trainer teacher.

To better understand if the reading is an important subject in the initial training, we reviewed the list of end-of-study projects in the two targeted CRMEFs. From a list of projects, we

found only a few that focus on reading and several that deal with language or foreign languages, such as the learning of French. (See the list attached in **Annex 2**.)

There are also projects conducted by regional teams in relation to the UCRP. Similarly, only two projects addressed reading.

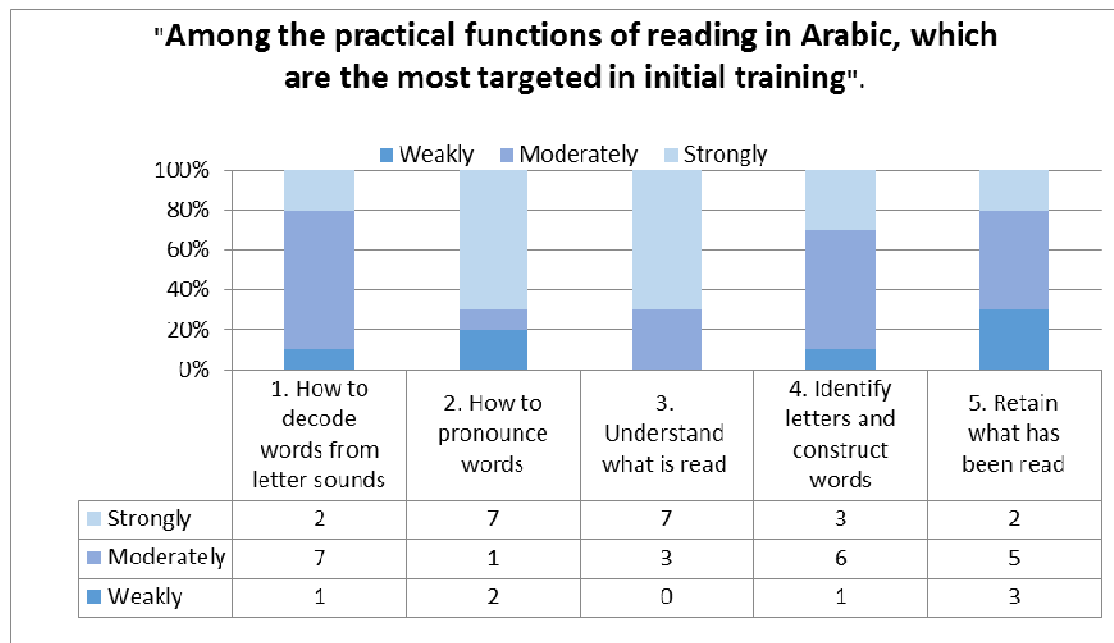
Reading instruction in Morocco. Arabic teachers generally recommend, in the training, the whole word method for teaching Arabic. This method follows these steps:

- Reading of the text (expression)
- Reading of the sentence by students (reading exercise)
- Writing (focusing on identifying the letter inside the sentence in different places)

In this methodology, students are invited to “read” texts before learning how to decipher the smallest units of letters and words. Reading is done in a dual process involving expression and writing, using sound (functionality) and practice, like writing on sand, modelling pastes and drawing, and oral expression of written text. COFI’s four skill areas are learned in various activities, including those related to reading.

We can conclude that during initial training, the subject of reading is addressed at a high level of oral language or comprehension of texts, but without going through the details of the didactics of the basic components of reading. For example, **Figure 4** below shows that functions that are explicit and directly related to reading (decoding words, identifying letters) are only moderately or poorly considered, as is the idea of retaining (and therefore using) what is read.

Figure 4: Functions of Reading the Initial Training



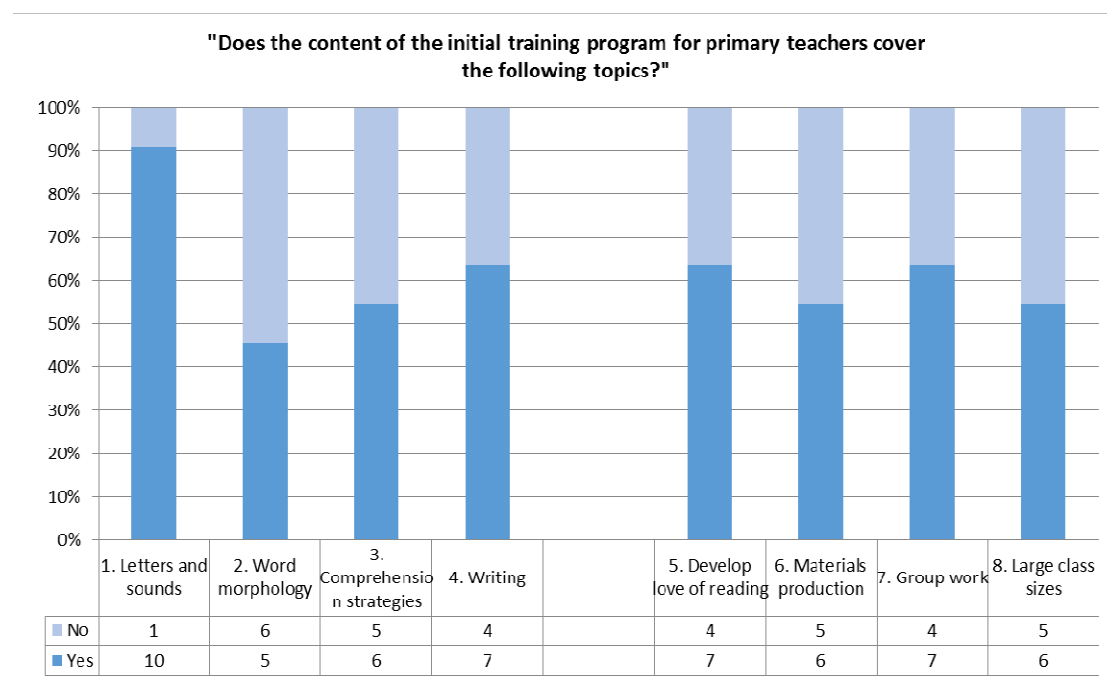
Data from Online questionnaire (self-administered) to CRMEF

Trainers who responded to the online questionnaire were also asked to provide feedback on the different levels of skills and methods put to use by COFI:

- Basic components of reading (sounds, letters, syllables, words)
- Word morphology (roots, word structure)
- Comprehension strategies for written texts
- Writing instruction
- Develop positive attitudes towards reading (for pleasure)
- Design and make the teaching material for reading instruction
- Teach using group work strategies
- Teach reading in large classes

Figure 5 presents the results and related comments.

Figure 5: Reading Instruction in CRMEF



Data from online questionnaire (self-administered) to CRMEF

The highest proportion of responses concerns the basic components of reading (sounds, letters, syllables, words), which 90 percent of teacher trainers say they include in the contents of the initial training. This result is in some sort in contradiction to our interpretation of **Figure 5**, so we need more research on the reality in the courses delivered by CRMEF. The lowest proportion concerns morphology (roots, word structure). Between these two, we find that there is a great deal of inconsistency between the subjects taught in the different CRMEFs. This leads us to question whether training quality is guaranteed from one institution to another. It is interesting to note that despite the statement on group work, very few teachers implement this strategy (see report on Component 3: Analysis of attitudes and practices) to differentiate the instruction.

This research also targeted the graduates from training institutions (people who had their training in CRMEF and are now in-service teachers of primary levels). The reading

instructional method recommended by these graduates can be summarized in three steps and adopts a diversified approach. The proposed hierarchical steps are:

1. Decoding of syllables, their pronunciation, and the links existing between them
2. Understanding what is read and its use in other reading situations
3. Encouraging free readings

As to the method used by these graduates, it consists of three methodological variations prioritized as follows:

1. Reading of a whole sentence containing the target syllable
2. Syllabic reading using the target syllable as the starting point of reading
3. Mixed reading alternating the two previous forms of reading and reading in all directions (word, syllable, sentence, text)

In the whole-word method recommended by teacher trainers, graduates apply a method that deals with the word-level units before reading the sentences. Observations of the reading lessons given by preservice teachers in first, second, and third grade classrooms, and also during interviews with mentor teachers, show that the focus is put on the oral aspects of reading texts; for example, the knowledge of phonemes in correspondence with graphemes “د” or “ض.” However, the procedural is less evident; for example, learning to read texts that contain graphemes corresponding to the phoneme “ت,” and understanding how its function (sound) differs if it is at the beginning, in the middle or at the end of a word. As to conditional knowledge, or determining the suitability of a reading text destined for pupils at a given educational level, it does not exist at all, according to mentor teachers. The first study on textbook analysis provides more information on this particular aspect of the analysis of handbooks and texts proposed for classroom reading.

Our research targeted 180 in-service teachers (also in combination with the third study on attitudes and practices of primary school teachers), which allows us to compare the opinions of in-service teachers (practicing in classrooms for longer than the aforementioned graduates) with preservice teachers. As to reading methods used in the classroom—syllabic, mixed, and whole-word methods²⁵—the responses obtained from teacher interviews are shown on **Table 4** below:

Table 4: Most Efficient Methods According to Teachers

Type of reading	Preservice teachers	In-service teachers
Whole word	43%	35%
Mixed	35%	46%
Syllabic	17%	19%
No answer	4%	0

Data from teacher questionnaire.

While the syllabic method is overall considered efficient by the two categories of teachers,

²⁵ Note : The “phonetic” method is not well known or used in Morocco and was not a choice in the questionnaire; however, the “syllabic” method, also known as “analytic,” resembles a phonetic approach. See also comments in “Recommendations” on the need to raise awareness among teachers and trainers of the need for a standard vocabulary around this subject.

they seem to hold opposite opinions with regard to the efficiency of the whole-word and mixed methods. Moreover, the in-service teachers often think that the mixed method is more efficient. Why such a gap? Is it evidence of the fact that the theory (whole-word method), recommended by the teacher trainers during initial teacher training, is inconsistent with the needs of pupils? We will come back to this issue after analyzing the practical training part of the initial training.

Practical training

How school-based trainings are carried out. During the initial teacher training, teachers alternate between theoretical courses in the CRMEF and practical training in schools under the supervision of a mentor teacher. We examined in Section 1.4 the importance of such practice, whether it be “virtually” or “contrived” in a simulated situation during theoretical coursework, or by the more authentic school-based component. **Table 3** indicates that primary teachers believe the same—the school-based training part was deemed “useful” or “very useful” by 60 percent, and the same percentage (60 percent) said that the theoretical training was “not useful” or “fairly useful.” How is the practical training conducted?

The practical training, as described by trainees, is conducted in two main periods. In general, 4 to 8 trainees go to a classroom. First, trainees are introduced to the school environment and observe how the mentor teacher teaches; second, the trainee gives a lesson on a given subject. Then, the lesson is observed by the mentor teacher, who shall assess his/her work and award grades that will be taken into consideration for his/her final exam. The other trainees will also observe the work and record their comments on the observation grid delivered to them by CRMEF. Once filled, these grids will serve to give their direct feedback to the trainee in the presence of the mentor teacher. From time to time, the mentor teacher gives some advice and mainly administers grades. According to the interviewed trainees (N=23), 40 percent did not have the chance to teach a reading lesson. Among those who had this chance, 13 percent got no feedback from the mentor teacher on how to improve the lesson. The remarks made to the trainees following a reading lesson revolved around pedagogy 26 percent of the time and around time management 17 percent of the time, while the remaining respondents (57 percent) provided no answer at all.

CRMEFs cover classroom management as a subject; however, no follow-up or support is ensured for teachers in training by their trainers during the school-based component in order to assess whether the theoretical courses are appropriately informing the training situations. Teacher trainers rarely provide such support, and school-based practice rarely involves actually managing the classroom.

Since there are several trainees who alternate delivery of one lesson, the observation grids used are very complex and difficult to fill in during a reading session, which may be as long as 35 minutes or as short as 15 minutes. Hence, the content of such grids cannot be communicated during the discussions that follow lesson delivery. If made simple, these grids can become an excellent tool for the analysis of teaching behaviors, especially if their contents are discussed in a regulation session in the presence of trainers and mentor teachers. The grids completed during the observation of the reading lessons given by the mentor teacher or by one of the trainees should be considered learning materials that need to be analyzed and used when training the trainees on lesson and classroom management to allow them to examine and provide a critical view of their behavior.

It is important to understand the status of the mentor teacher and his/her relationship with the trainees. In fact, nothing distinguishes the mentor teacher from other teachers except for a small compensation, which often takes a long time to come; mentor teachers have had no specific training on such a difficult task as providing support to trainees. Moreover, trainee teachers are not really held responsible for the classroom during a continuous period of time, so the authenticity of the learning experience is questionable.

Teaching of reading. To deliver a reading lesson for Grades 1 to 3, trainees are invited to follow the following steps:

- Warming-up (introduce the situation)
- Reading text (by the pupil[s])
- Identifying the sentence and its structure
- Understanding questions;
- Isolating the word and/or the letter to read; reading it repeatedly to learn it by heart

According to the interviewed mentor teachers, not all trainees are able to follow these steps. For some, several lessons are required to learn to apply this method, unless the mentor teacher imposes his or her own method, which is often the case.

Five trainees, observed during the research, have developed their own reading methods, as follows:

- To start the lesson:
 - in two out of five cases, a song in relation to the subject at hand
 - in two out of five cases, direct reading from the text
 - in one out of five cases, a definition of the subject of reading
- To close the lesson:
 - in two cases, a song
 - in both cases, a question of comprehension
 - in one case, an open discussion in small groups between the pupils in the class

For the five cases, the interval between these activities is devoted to alternating teacher/student read-alouds, punctuated by comprehension questions. According to mentor teachers and trainees, the children enjoy reading lessons that begin with songs. Songs help students develop a liking of reading and make them more active, especially in the first and second grades of primary school.

For the majority of the time, the trainer's attention is directed to the whole class (67 percent of observations recorded during classroom observations), with a focus on pupils individually²⁶ only 29 percent of the time. Very little time is dedicated to group work, which is an appropriate method for managing multi-level classes (classes where there is a mix of first, second, and/or third grades) and differentiating instruction within the same grade as a way to address the diverse needs of pupils. In fact, the method used by a teacher to organize the

²⁶ When the teacher is focusing attention on an individual student, that can either mean that one student is reading aloud while the other students listen, or that all of the students are doing seat work and the teacher is in the process of verifying the work of one student.

classroom, encourage pupils to take part in it and assess them in a lesson on reading is indicative of the teacher's pedagogy. Given the preponderance of an approach centered on the teacher, who is usually asking questions of the whole class, it is likely that little time is given to pupils to work independently—a method which is also very important to enable learning how to read²⁷—or differentiate instruction based on student needs.

In fact, all the reading lessons given by trainees primarily target the comprehension of what is read; this is the main thing that they pay attention to. Reading mistakes are automatically identified and corrected by teachers. Words containing the syllables to be learned are written on the whiteboard/blackboard and read several times by the trainee and the pupils.

The method recommended by mentor teachers is as follows:

- *First year:* The teacher and the pupils read a text:
 - reading syllables and writing them when necessary
 - forming one or two sentences
 - reading the sentence by the pupils while teachers say the spelling.
- *Second year:* The teacher and pupils read several sentences contained in a paragraph.
- *Third year:* The teacher and pupils read long texts:
 - doing pronunciation exercises while observing punctuation marks
 - Alternating, at this level, between reading and writing

According to trainees, the half-hour per day currently dedicated to reading instruction is insufficient to teach pupils to read, let alone become independent readers. Trainees wonder how they can be teaching reading while learning grammar is conducted much later. The reading texts in the early years of primary school are read aloud in order to make reading easier for the pupils who have no knowledge of grammar. Such a situation shows the probable lack of vision on the part of teachers when it comes to the concept of “reading.” This is in line with the data in **Figures 1** and **2** that suggest that little importance is given to basic skills of reading, and that ‘reading’ is most often confused with the more general notion of “Arabic language.”

Despite these incoherent responses (or perhaps because of this lack of clarity on the part of trainers on the subject of reading) only 30 percent of trainees (n = 23) believe themselves to be, at the end of their initial training, “very well” or “perfectly well” prepared to teach reading in Arabic in the first years of primary education. This figure was disputed by the inspectors in charge of the on-site supervision and control during the focus group held with them. The inspectors believe that according to their observations, fewer teachers than that are well prepared for their teaching profession through the initial training. They continue to argue that this training is very theoretical and far from the reality of the classroom.

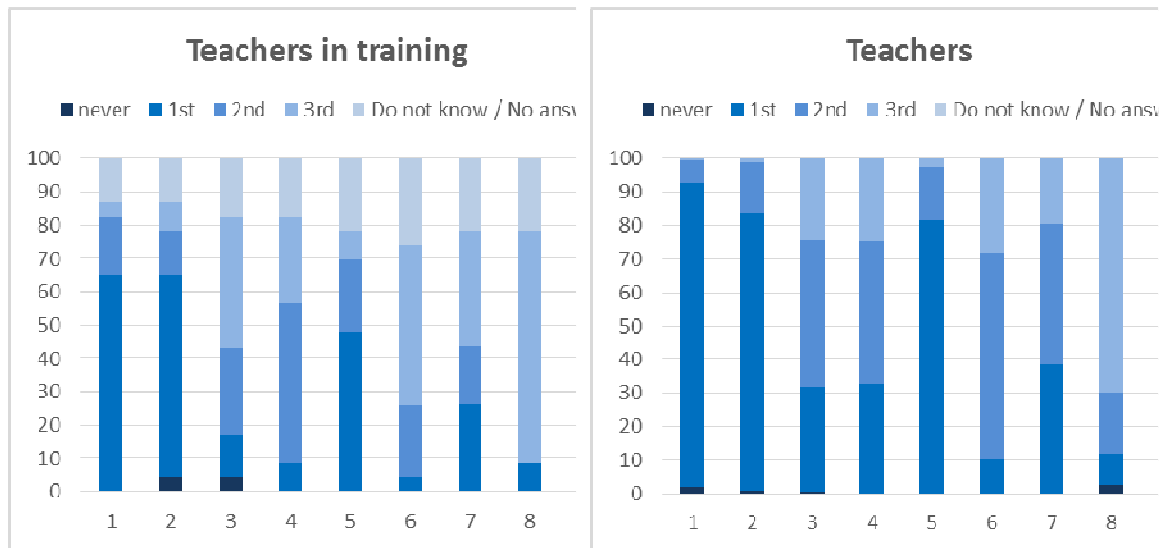
The data extracted from the teachers' questionnaire inform us about teachers' (self-reported) preparedness to teach such skills from year to year. What is quite interesting in **Figure 6** is the

²⁷ See literature on “gradual release of responsibility,” for example, Fisher, D. (Undated). *Effective use of the gradual release of responsibility model*. Author Monographs. Macmillan/McGraw Hill. Available at: https://www.mheonline.com/_treasures/pdf/douglas_fisher.pdf

high proportion (13 to 26 percent) of the teachers in training who do not know what year is the most important to start teaching the different skills.

Figure 6a & 6b: Teaching the Different Skills of Reading in Primary School

From your point of view, what year is most important in primary school for teaching the following skills of reading in Arabic?



Legend : 1- Correspondence between sound and symbol (the letter), 2- Phonemic awareness (the words are composed of sounds oral), 3- Vocabulary, 4- Understanding (oral or written); 5- Writing; 6- Speed in reading; 7- Speaking; 8- Grammar; 9- Morphology (root, word structure).

Data from teacher questionnaire.

For the two categories of teachers, the most important skills in the first year are “correspondence between sound and symbol,” “phonemic awareness,” and “writing”; however, a large portion of trainee teachers think that these skills should be taught in the second or third grades. Trainee teachers give less importance to speed in reading in the first and second years. For both categories, rules of grammar and word morphology are important skills to teach mainly in the third year; however, there is larger number of practicing teachers who recognize the importance of morphology in the first years.²⁸ It is also interesting to observe that the two categories of respondents give more importance to comprehension in the second grade than in the third grade. Our data do not allow us to explain why this is; however, this finding leads us to believe that teachers view comprehension as an already acquired skill and switch to other issues in the third year. However, experience in reading instruction around the world demonstrates that the explicit teaching of comprehension strategies is important to maintain in all grades.

Another indicative result is the number of trainee teachers who maintain the view that some skills should be acquired before the first year of school. Their opinion is very different from that expressed by practicing teachers (see *Table 5*).

²⁸ As a reminder, the work of Boyle, et al. (Boyle, H., Al Ajjawi, A., and Xiang, Y. [2014]. *Topical analysis of early grade reading instruction in Arabic*. Report prepared for USAID/Washington. EdData II Task Order 15 [DEP/AME]) suggests that paying explicit attention to the morphology of words (roots, prefixes, suffixes, etc.) is a strategy that can help children learn to read in Arabic.

Table 5: Teachers' in Training and Practicing Teachers' Expectations of Pupils' Capacities in the First Years of Primary Education**"In your opinion, in what year should a child should know ..." (Percentage by type of teacher)**

	Before 1st		1st		2		3		Do not know	
	PS	IS	PS	IS	PS	IS	PS	IS	PS	IS
a) Understand a simple story (oral)?	9	3	70	82	4	9	4	4	13	0
b) Knowing the letters of the Arabic alphabet?	39	18	43	80	0	2	4	0.3	13	0
c) Write the name?	22	7	56	84	9	8	0	1	13	0
d) Write a sentence?	4	0.4	61	75	13	21	4	3	17	0
e) Read a sentence?	4	1	74	83	9	14	0	2	13	0
f) Read a small book?	0	0	13	21	26	54	43	24	17	0
g) Understanding the meaning of a small book?	0	0	17	18	22	45	30	37	30	0

PS—preservice; IS—in service

Data from teacher questionnaire.

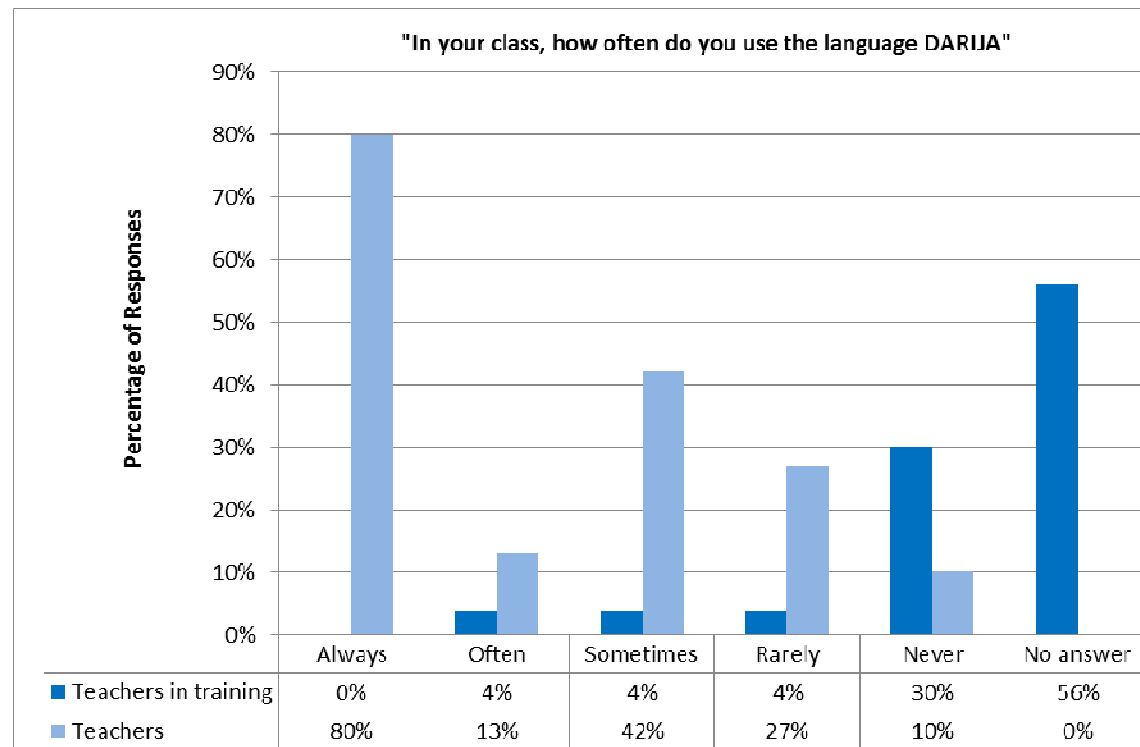
According to the expectations of 39 percent of trainee teachers, in the first year of their education, pupils should have already developed alphabet knowledge, and 22 percent of them should be able to write their name. Such expectations are not surprising, because the whole-word method recommended by the theoretical training gives more importance to the level of reading syllables and sentences, while apparently ignoring letter- and sound-level skills. Likewise, textbooks are written with a level of difficulty that is very high (see the first study report on textbook analysis). On the other hand, only 18 percent of trainee teachers believe that children should know the alphabet before the first year of primary education, and 7 percent think pupils should know how to write their names. The difference is no doubt related to the years of on-site experience during which the in-service teachers observe the capacities of pupils and take notice of the low percentage of pupils who went to preschool or somehow learned reading before the first year.

The problem of low reading acquisition in the early grades is also related to low literacy environment in the home and to parents who do not encourage children to read or are just unable to do so (severe illiteracy in the rural areas). Very few inspiring examples are found in the surrounding environment of children to boost their reading capabilities. For example, children do not see people reading when they take the city bus, the train, or the intercity bus, or even at home. They often hear them talking, but it is in another variation of Arabic. This is another factor not inciting them to read. According to the interviewed teachers and trainees, Darija is largely used by mentor teachers in mathematical and sciences courses. The next section will shed more light on this complex subject.

The language of instruction. In Sections 1.4 and 2, we highlighted the importance of having a good command of the Arabic language as a prerequisite for reading instruction in Arabic (this is referred to as “subject knowledge”). There is no sound reason for limiting the entry of FUE graduates who specialized in arts to initial training institutions, and researchers observe that such graduates may be more qualified than others as they have a good command of the language and will need less training to brush up their level in the subject (which saves time

for learning pedagogical content knowledge). In the course of this research study, and mainly during the classroom observations at the practical training, we observed the effect produced by the teachers who do not have a complete and good command of the language of instruction. When a trainee seems hesitant about the usage of a given word to be pronounced or vocalized, he/she quickly switches to Darija. This is also deduced from the teachers' answers (see *Figure 7*).

Figure 7: Use of Darija in the Classroom



Data from teacher questionnaire.

Although the trainees did not respond in half of the cases, half of the teachers in the classroom who were interviewed (N=181) answered they “always” use Darija during the day. More detail on the use of languages can be found in the third study report on attitudes and beliefs of primary teachers.

It is worth recalling that according to the law, the CNEF recommends that:

The regional authorities in charge of pedagogy may, *within the framework of the curriculum portion left for them to handle*, choose to use the Amazigh or any local dialect aimed to facilitate the learning of the official language at preschool or primary school. [emphasis ours]

However, given that this regional and local portion of curriculum was never implemented, most teachers interpret this clause as non-authorization of the use of local languages.

Material used in reading. According to the observations made in the practice classes attended by trainees, photos and images of the textbook are photocopied and enlarged in order to be displayed on the board table in front of pupils. A single image or photo is used in a 35-minute lesson on reading on the subject illustrated by such photo or image (the ladybug in a lesson in Rabat). Some observations are worth noting:

- Although classrooms are decorated, these decorations do not seem to be intended to be used in the reading lessons given by trainees.
- The material used in reading lessons is considered very insufficient. It is often limited to the textbook and the images and photos contained in it.
- The interactive whiteboard and other ICT are, in general, often requested but their usefulness in reading has not been demonstrated.
- There are many digital resources prepared by the MENFP to support reading instruction in Arabic,²⁹ but they are not used in the classroom by the trainees and mentor teachers. Many do not even know that they exist.

In most classrooms, we observed posters and visual aids; however, this material is not made available in all classrooms. Its availability depends on the willingness of teachers concerned about decorating their classrooms and providing pupils with visual aids. Nothing implies that such material is efficiently used in the reading lessons; it is there just for decorative purposes (survey on the observation of reading classes). The language used in these materials is predominantly Arabic, then French and Amazigh on the third level. This choice of display of the language corresponds to the importance of these three languages at these school levels.

It is useful to conduct a comparison between the practices of preservice and in-service teachers since they use different types of material. **Table 6** below classifies answers by teacher category.

Table 6: Teaching Materials Used

	Teachers in training (n=23)	Practicing teachers (n=178)
Textbooks	56%	91%
The teacher's guide	56%	86%
Notebooks for writing exercises	17%	91%
Magazines, newspapers	4%	17%
Novels	0	11%
Posters	26%	53%
Manipulatives (small cards, games)	22%	24%
Internet	4%	0.8%
Computer	4%	0%

Data from teacher questionnaire.

²⁹ The usefulness of these digital resources was not evaluated, but the finding is that the MENFP has a center for digital resources in Raba. A large, multidisciplinary team works permanently to produce and disseminate digital content to the AREF and throughout the system. Moreover, given the importance of ICT in the COFI (see Section 2.1 of this report—there is a module of 28 hours that targets the objective of “Acquire competencies in the use of information and communication technologies in their professional practice”), it is rather surprising that no one interviewed during this study was aware that they exist, yet many talk of the use of interactive whiteboards.

What emerges as of interest in this table is that only half of preservice teachers use the textbook and the teacher guidebook, while the in-service teachers use them often. Is this because of the lack of such material in the classes where trainee teachers are assigned, or by the methods recommended by mentor teachers? This issue deserves more attention because if preservice teachers do not have enough guided experience in how to use textbooks, then the quality of their instruction will necessarily suffer when they become in-service teachers held responsible for a class.

The relationship between theory and practice

The problem of switching from theory to practice and vice versa is very serious. Given the focus of COFI on professional and functional tasks of the teacher rather than on the relational and subject-related aspects, and given also the small amount of time devoted to practical work (virtual, contrived, and real), once in the classroom, the trainees find that they lack teaching experience and strategies. This observation applies to all subjects including reading. The theoretical part of CRMEF training addresses reading randomly with no explicit interest in the fundamental components of reading. The textbooks' comprehension level is high compared to the capacities of most pupils (see the report on curriculum and texts). However, once in the classroom, the teacher improvises as much as possible due to lack of (or little) knowledge of modern Arabic and reading. In fact, the preservice training is most likely not preparing future teachers for the challenges faced in the classroom. Several trainees claim that this problem will be resolved later in practicing teaching; however, what consequence does this have on pupils' learning of reading? Wouldn't it be preferable to bridge the gaps between theory and practice to enable new primary teachers to gain more confidence before coming to the classroom, and to give new teachers a fully-equipped teaching "toolbox" better adapted to the pupil needs? Or are teachers really able to develop their teaching practices as they teach? Either way, how much is the evolution of classroom practices influenced by initial training?

Several arguments are given to explain the obstacles encountered when moving from theory to practice:

- Mentor teachers are not introduced to the new theoretical material of initial training or are not convinced.
- Trainees are short on time to master the theoretical coursework before applying it, and to grasp the pedagogical challenges of the classroom and analyze them from a theoretical view.
- Trainers are usually absent during the presentation of the lessons by trainees.
- Using the data obtained from classroom observations remains a problem.
- Trainers have little or no teaching experience in primary education.

Regarding this last point, we noted that only 4 out of the 13 trainers who took part in the online survey have prior experience in primary class teaching. This observation is very important because despite the existence of a universal COFI at the CRMEFs, each trainer is responsible for choosing the training methods and approaches. Each trainer chooses the method more convenient to his/her vision of the teaching profession and how best to develop knowledge in this field. Moreover, our research found very little coordination (co-training) between mentor teachers and trainers inside CRMEF. If trainers have no previous

experience in primary education and do not follow up on the progress of their trainees in the practical training, how can they have a realistic vision of pupil needs today? In fact, it is only recently that the career advancement system has made teaching experience a prerequisite to becoming a trainer—not the case before. Alternatively, one can progress by acquiring degrees or through seniority. This type of advancement enables the teacher to go from one level to another (i.e., primary to middle to secondary school) or to become a trainer in CRMEFs. Hence, this type of promotion values much more the academic and theoretical knowledge than the practical experience. On the other hand, inspectors are all initially teachers who got a promotion after sitting for an admission examination taking place at the inspectors' training center. They do not have any apparent role in initial teacher training, however; their role in ongoing professional development deserves more attention.

When we take a look at the reading instruction methods for the first three years of primary school recommended by trainers, mentor teachers, the textbooks, and the national teaching guidelines, we end up with three different viewpoints related to the image teachers have of:

- the pupil;
- the subject (reading); and
- the official primary curriculum

In such a situation the teacher can only be confused. The only choice is that once appointed as a teacher, she or he must be able to develop and improve his/her own viewpoint throughout her/his carrier by comparing it to other methods learned from colleagues or his/her own readings. While constant evolution of practice is good and necessary, it would be preferable that teachers follow from day one the best evidence-based method that is available. In this way, teachers would not lose time looking for the best method at the expense of the students.

As to reading, the gap between theory and practice may be explained by the lack of an explicit theory of learning to read during the first years, especially in the linguistic context of Morocco. Certainly, as demonstrated by this research, it seems that reading is confused with the learning of Arabic (without distinguishing between the different requirements when teaching it to children and adults as a foreign language), literature, communication, and other

“Things are studied in global manner during the training at the center, even though the teacher, when he or she is put before the students in the classroom, is supposed to teach reading as a subject.”

- COMMENT FROM A GRADUATE OF A CRMEF REGARDING THE ABSENCE OF A SPECIFIC TRAINING AND A “SCIENTIFIC FRAMEWORK” FOR READING AS A SUBJECT AREA IN CRMEF.

high-level concepts; yet it ignores the intellectual and cognitive basis that is universally necessary to becoming a reader. The fact that the word “reading” does not even appear in the official documents is telling. Moreover, according to the graduates of the institutions of training, reading is addressed in all initial training activities, since all subjects deal with reading as a tool and not as a learning object. This is problematic, as it means one should “learn to read” before “reading to learn.” The theoretical part of the training in Arabic, including reading and other subjects, is of very high quality according to CRMEF graduates.

However, the methods recommended by mentor teachers and textbooks seem to ignore the recent research conducted elsewhere in the Arabic-speaking world, which demonstrated the efficiency of a phonetic approach (*tariqa sawtiya*), the importance of demonstrating oral capacities of the language, and strategies for improving the vocabulary, mainly in the diglossic context (the gap between the Arabic spoken at home and that used at school), etc.³⁰ Another example is that of mentor teachers who, during the interviews, reveal some indication about their own lack of awareness of how best to teach children to read. For example, they claim it is difficult to teach two letters a week to students, especially to those who have not been to preschool. However, two letters a week is a perfectly reasonable expectation according to other international experiences. Teaching less than that would use too much time throughout the year and delay the transition to reading words and sentences. The solution is to find good methods to make it easier for teachers and more effective for pupils.

On the other hand, mentor teachers have a good perspective on how to train future primary school teachers. They emphasize the need for trainers and teachers of educational sciences to support trainees to help them better understand and overcome the problems of reading. So, a better discussion between mentor teachers and trainers may help make better use of lesson observations; this can serve the purpose of bridging the gaps between theory/practice if jointly done by teachers at CRMEF and those in charge of the practical training.

An effort must be made in the selection of candidates for preservice training who satisfy a set of prerequisites (the subjects taught: languages, math, science, psychology, sociology) in order to provide sound, qualified, theoretical and practical training.

But the practical part still has limits, although this is the aspect of initial training that has the potential to truly prepare teachers for the real needs of students in learning to read, especially in the rural areas. This is why it is necessary to improve the initial training module on the management of multi-level classes (CNM) by putting more emphasis on the real problems faced in managing these classes based on situations experienced during practical training. The module must adapt to these situations and integrate them both theoretically and practically. Video recording of lessons taught by trainees can be improved to analyze trainee performance in theoretical courses and practice sessions.

Although it was not the main objective of this research, it is worth mentioning that all interviews encouraged people to express their opinions on how to improve reading instruction and encourage children to read. The most common suggestions are summarized in the box below for reference.³¹

³⁰ See Boyle, et al. (2014).

³¹ There is also a lot of research on motivation to read that describes intrinsic (internally motivated) and extrinsic (externally motivated) rewards, grades, competitions, etc.) See, for example, Schiefele, U., Schaffner, E., Möller, J., Wigfield, A., (2012). Dimensions of reading motivation and their relation to reading behavior and

Some Suggestions on How to Motivate Children to Read

- **Have reading corners in all primary classrooms**
- **Choose texts that are interesting and easy for children to read**
- **Develop more stories and songs in the reading materials**
- **Make reading the subject of classroom and student projects**
- **Mobilize the media to raise awareness of reading**
- **Organize reading competitions similar to those organized for art or sports**
- **Encourage NGOs to organize special events in the schools around reading**
- **Promote reading during the summer break in places where children gather (vacation centers, etc.)**
- **Better align reading materials with the lifestyle of the readers, especially the youngest**

3. Conclusions

3.1 Summary

Learning to read starts at the beginning of schooling—even at preschool—when the learner is faced with written texts to read. In addition, the ability of a child to learn to read is made easier and more efficient to the degree that the child is proficient orally in the language. The process of mastering spoken language, vocabulary, and phonemic awareness starts even early than preschool, and the effect of oral language stimulation starting from birth is by no means insignificant. Learning to read happens throughout the first three years of primary school, during which pupils are expected to gradually master the fundamental mechanics of reading; that is to say, to acquire the ability to establish the link between graphemes and phonemes and then relate them to read words and then sentences, while gaining the ability to listen and speak the standardized and modern Arabic. Primary school teachers obviously play a key role in this process, especially when preschool is not widely accessed. In this context the role of the teacher in the first year is even more important to raise achievement for all pupils, despite discrepancies in their previously acquired skills. Initial and continuous training is vital to the success of this objective above and beyond the existing module on preschool education, which needs to be strengthened as well.

Additional skills that have been identified as needing to be developed in the initial training are as follows:

competence. *Reading Research Quarterly*. 47(4):427–463. Three important factors for developing intrinsic motivation are: competency, relevance, and autonomy. First, texts should be adapted to the level of the child; next, the texts should be interesting and related to their lives; and finally, the child should have the opportunity to choose the books to read and to work independently sometimes. The most important thing to recall is that extrinsic factors are not as powerful as intrinsic factors in the long run, and children are motivated to read when they find themselves reading successfully. Therefore the argument that a lack of motivation *a priori* is the explanation for the poor reading skills of children is not necessarily a valid one. It is more likely that they are not motivated because reading has always been too hard to make it enjoyable or they have not been taught efficiently.

- A good command of the Arabic language and reading
- Knowledge of the reading strategies used by pupils and the relation between these strategies and the mother language (Darija, Amazigh, and Hassania)
- A profound knowledge of pedagogical methods specific to reading in the first years of primary school
- An overview of the techniques of managing multi-level classes in the times reserved for reading, as well as differentiating instruction in classrooms with a range of abilities from prior (preschool) learning
- Information on the creating a rich literacy environment that promotes reading
- Knowledge of how to make the best use of textbook(s) and other teaching material appropriate for reading in the first three years of primary
- Knowledge of assessment tools that enable teachers to evaluate pupils' progress in reading
- Basic knowledge of pedagogic research, mainly relative to "action research" allowing future primary school teachers to analyze the obstacles faced by pupils in learning and to establish corrective and remedial measures
- Capacity to share problems faced and solutions found with other teachers and capacity to discuss them openly
- Capacity to communicate with pupils' environment, first with parents and parents' associations
- Capacity to innovate in teaching methods and to listen to pupils
- Basic knowledge, eventually, about recent research on neuroscience

Improved training would cover all four professional domains, namely professional, functional, relational, and disciplinary (see **Figures 2 and 3**). These elements, put into practice, characterize what is called the effective teacher. They take into account skills described by Perrenoud by bringing them closer to the daily practice of teachers and aligning them with components of effective reading instruction characterized by the following five elements: time on task, reading materials, teaching methods, evaluation, and language of instruction.³² Which of these elements were identified in this study? What are those remaining for future teachers to be prepared to better teach reading to elementary students?

Currently, the elements present in the initial training in Morocco are those addressed by the four qualifying skills: the analysis of teaching tools, learning assessment, classroom management, and related educational research tools. These qualifying skills concern more professional and functional categories than relational and disciplinary ones. The problem is that these skills are applicable to all academic subjects and are covered in a general manner. Disciplinary skills (subject matter competency, the pedagogical knowledge of the subject, the evaluation of the subject, etc.) are subsumed within the broad categories and do not form a separate subject. Consequently, reading is implicitly and indirectly taught at CRMEF, without taking into consideration new knowledge about how pupils learn to read Arabic. Trainees do not have enough time to practice before being assigned to a class.

³² Known as the 5 Ts : Time, Text, Teaching, Testing, Tongue

In addition, graduates from schools other than the Faculty of Literature and Language and FUE of languages appear to be less proficient in Arabic and lack pre-existing knowledge in reading strategies and methods in the early grades. A basic point to remember is that the FUE forms candidates to be able to sit for exams organized by the CRMEF by preparing subject-specific teachers (math, physics/chemistry, life and Earth sciences, Arabic, French, English, history/geography, etc.). There is nothing that prevents these candidates from choosing to become primary school teachers; however, according to MENFP executive officers, all FUE graduates choose the teacher career path leading to college or high school teaching. It is, therefore, necessary for the FUE to develop similar trainings adapted to primary school teachers (disciplinary versatility).

The training of future teachers is done in two largely separate institutions (CRMEF and practice schools.) This disconnect is having a negative effect on the initial training of primary teachers. This observation was made during the reading lessons observed that were led by the trainees. If the approach promoted (from the whole-word approach to syllabic) is the same in both institutions (CRMEFs and schools), its implementation differs from one to another. Trainees see this difference as an obstacle; however, it could be a methodological asset in a model of “co-training” (see *text box that follows*) that involves more coordination between teachers involved in coaching trainees during their preservice period.

Reading is a complex process that involves a combination of physical, psychological, and intellectual actions. It involves recognizing what is a written word and being able to verbalize it correctly by making connections between graphemes and phonemes, words, and sentences, then making meaning out of what is read and practicing the acquired reading skills in different situations. This is why:

- Learning to read must be taught explicitly at CRMEF with its own education material, and not implicitly as is the case today (the low level of satisfaction with the theoretical training received leads us to recommend this approach).
- CRMEF must remain up to date on the state of the art in Arabic reading instruction and integrate it into the initial training.
- Sufficient time should be reserved for reading as a subject area in CRMEFs as an essential component of the training of future primary school teachers (qualitative and quantitative data highlight this need).
- Great importance should be given to reading in the school-based component in terms of preparation, execution, and practice, through all taught subjects (language, mathematics, science).

This study has underlined other strategic actions, though not necessarily directly connected with the objectives of this study (initial teacher training), which can improve reading instruction in primary school, and thus make teacher training more efficient:

- Reading methods, situations, and tools promoted nationally must be diversified, innovative, and attractive to learners and especially simplified to follow a developmental progression appropriate to learners who are confronted with Arabic letters or who are learning MSA for the first time.

- The complementary or supporting modules within the teaching certification should be dedicated to strengthening disciplinary subjects, including reading and writing.

Table 7, below, summarizes some of the strengths and weaknesses of the current initial teacher training program.

Table 7: Positive and Negative Aspects of Initial Training Program

<i>Strong points of the initial training</i>	<ul style="list-style-type: none"> • Theoretical and school-based courses account for 40% and 60% respectively of the total time of the training year, which recognizes the importance of school-based work, although these percentages assume that trainees have sufficient prerequisites in the basic subject (Arabic for this study). However, this 60% of the time should be used more efficiently to train qualified teachers and help pupils learn better. • As institutions of certification, the emphasis of the curriculum on professional work methods rather than knowledge and content is appropriate. However, the relevance of this choice will only be effective in the future when the universities will prepare graduates for the national education system with a good command of their subject (in this case, language and reading instructional methods). • The transition from goals-centered curriculum (pre-2012 programs) to a competency-based curriculum (COFI). • The usefulness of the practical training as highlighted by the trainees and mentor teachers, which largely justifies the time allotted to it compared to the theoretical training.
<i>Points to be improved in initial training</i>	<p>In spite of the CRMEF training strengths identified by the respondents, there are still some weaknesses, notably :</p> <ul style="list-style-type: none"> • We observe at the end of the initial training that trainees still commit grammar mistakes in MSA both in oral and written forms. They often tend to switch to Darija to avoid making common mistakes. • Darija, which is hardly utilized in Arabic reading lessons, is largely employed (orally) in teaching other subjects (math, sciences, and humanities) in spite of the mandate to use MSA as the language of instruction. This is a missed opportunity for the reinforcement of the Arabic language and thus of the reading in Arabic, and presents a double-standard where in the local dialect is used to support some subjects but not others. Efficient strategies to face the challenge posed by the linguistic context and ways to facilitate the pupils' learning seem lacking in initial training. • The wide variety of subjects and activities to be carried out by trainees in one year of training, even if it was normal one, will keep them far removed from the basic skills courses like reading. • Absence of coordination between universities and the regional departments that train civil servants. • Lack of real opportunities to establish the linkage between theory and practice. Officials who are in charge of these two types of training rarely communicate let alone work together. • The fact that the initial training is focused on the delivery of a professional certification; CRMEF can never bridge the gaps of insufficient subject knowledge to begin with. • The wide diversity of profiles of candidates joining the CRMEF is in contradiction with its certification mission.
<i>Examples of possible improvements</i>	<p>We can summarize suggestions on how to improve the training in reading as follows:</p> <ul style="list-style-type: none"> • Creating a university specialization in primary school teaching could contribute to the improvement of professional services, notably in reading. • Mentor teachers should be more communicative and share their comments more often with the trainees. • Establish an official status for mentor teachers and train them in working methods, assessment, communication, coaching, etc. Ensure that mentor teachers have the opportunity to participate in educational research and theoretical teaching and that trainers spend more time in the field at school to grasp the real context (especially those who have never been a primary school teacher). • Development of educational research on reading, in consultation with the schools of application and CRMEFs (schools as sources of problems and real research subjects). • Provide opportunities at the CRMEF to graduates to participate in research activities on reading and enrich centers with their field experience. • Create reading laboratories that will address reading problems through an action-research approach. They will be set up at the centers of educational documentation

	<p>research (UCRP) and their regional offices. These regional antennas are considered laboratories of educational thinking.</p> <ul style="list-style-type: none"> • Training in CRMEFs should by all means be coordinated with that of universities in the portions of training that deal with preparing the students to become teachers. If the role of the university is to form specialists (in a given subject), CRMEF should teach the pedagogy of the subject as well as other professional and functional skills. • COFI is based on the idea that all students admitted to CRMEFs are FUE graduates. The reality is different since the large part of CRMEF candidates have not necessarily gone through FUE. COFI should incorporate changes to adapt to reality. • Recognize that lacking a generalized preschool, first grade becomes even more important to equip children with a solid base; this is why training primary school teachers (and streamlining curriculum, selecting learning materials, methods, etc.) should be of utmost importance.
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3.2 Strategic Recommendations

When formulating recommendations, it is difficult to separate the recommendations on reading instruction solely from more comprehensive recommendations relating to the organization of initial training. When recommendations concern changes in the system of initial training at a high level, it is logical that this will also improve the way teachers are prepared to teach reading in the early grades.

Establishing a strong linkage relationship between FUE trainings and CRMEF professional training

When comparing the two training programs in both institutions (FUE and CRMEF), we understand why the CRMEF curriculum focuses on professional certification only. Language (written, oral, literature, and pedagogy of Arabic), educational psychology, and even micro-teaching are also included in the FUE program. It would then be beneficial to coordinate between these institutions at the regional level to enable CRMEF to benefit from FUE. A strong relationship must be developed between CRMEF training and university education programs in terms of structures dedicated to preparing future graduates who would like a teaching career. If the role of the university is to form subject-matter specialists, then CRMEF should teach the pedagogy of the subject as well as other professional and functional skills.

In addition, all respondents raised the issue of the duration of the training (6 to 9 months in the best case), which is by far not enough, according to them. A minority proposes to deliver a nine-month training, while the majority recommends a two-year training with the first year devoted to upgrading and strengthening the subjects taught in primary school, and the second to focus on the professional training, including onsite training with real teaching situations to improve both quantity and quality of instruction. Another scenario is to keep the current duration of the initial training and make the first year in the classroom will be considered a continuation and confirmation of the professional training, combined with ongoing supervision, support, and assessments throughout the year. This is in line with the reasoning of professional development schools (see below). Of course, any decision regarding the content and duration of the initial training depends on the relationship between FUE/ universities and CRMEFs and the roles and responsibilities of each.

Recruitment of candidates

CRMEF entry requirements should also be revised to give more focus to Arabic language skills (written and spoken) as a non-negotiable prerequisite. The COFI is based on the idea that applicants to CRMEF are all FUE graduates. The curriculum should make the necessary

changes to adapt to this reality. In this case, a module on reading may reinforce the future teachers' training by making necessary adjustments to the COFI timetable.

If a measure of diversity in the initial qualifications of teacher trainees must be adhered to as a criterion in organizing CRMEF admission exams, to make this diversity more useful to primary school teaching—similar to what is happening in secondary school teaching—trainers and mentor teachers suggest the introduction of the specialized teacher status for primary education. Economically speaking, this proposal deserves more attention to determine its impact on human resources. It seems, according to interviewed teachers, that specialization would be the best way to guarantee that the school timetable is respected (if a teacher is absent, it is not the whole classroom that has to be impacted, which is the case today.)

From the pedagogical point of view, at least two objections have been raised:

- Elementary school children are still too young to adapt to the different methods used by several teachers.
- Learning can become too fragmented (in boxes) for children, while knowledge at this level must still remain interdisciplinary (like previous thematic lessons or scientific activities currently).

These objections are not substantiated by international experience, since there are countries where subject matter specialists intervene in the classroom with different methods without interrupting the pupils' development. Yet, some economic and logistic constraints can be expected. First, the use of specialists to teach the reading lesson implies that more time would be needed to plan and coordinate between teachers. This could also mean a loss of instructional time due to transitions between lessons if planning is not efficiently done. Second, economically speaking, forming specialists without being able to guarantee they will be retained in the same position or school can end up being very costly.

COFI's content

The fact that child-centered (child psychology and sociology) academic subjects or those focused on the type of knowledge to teach (epistemology, methods specific to subjects) are lacking in the training curriculum makes this training rather technical because it targets planning, management, and assessment. Educational research is a separate subject that introduces future teachers to the approach of conducting research on a specific problem. If universities cannot fill this gap, then the initial training should ensure training in significant subjects for those who will teach 6- to 12-year-old students.

The training curricula at FUE and CRMEF address the subject of reading in Arabic as a component of learning the Arabic language, even though the teaching curricula explicitly list reading skills to develop among students at each levels of primary (in the first-year, correct reading of three sentences; in the second year, four sentences; in third year, five sentences). How to achieve these standards must be addressed during initial training in CRMEF. According to the survey results, trainees are more likely to teach the first three grades upon their appointment.

The problem identified and analyzed regarding the gap between the reading skills contained in the curriculum about the teaching of the first three years of primary school and that about the initial training at CRMEF can be temporarily solved by designing a specific module on

reading at all levels of primary school, which meets the requirements and needs in teaching the subject of reading. This decision must be supported by the search for a sustainable solution through the following:

- Selection of teacher profiles for teachers to be admitted to the training
- Discussions with universities that make up the recruitment pool from which to draw these profiles
- A specific training module for reading should also consider the fact that discussions about the reading instruction training made us face a variety of concepts that would easily make one feel lost. These concepts revolve around reading approaches. To talk about the syllabic approach, several words were used (for example, syllabic, analytical, graphic, phonetic, sound, etc.). It should be compulsory to equip trainer and mentor teachers with a lexicon (a guide) to organize the concepts and establish uniform comprehension. It is also necessary to keep trainer teachers and in-service teachers updated on new knowledge on the methods proven effective in teaching the Arabic language.
- This orientation towards reading during initial training is also an opportunity to encourage more reading research in universities or centers of educational research. The effectiveness of different methods should be proven in the Moroccan context through rigorously evaluated (with experimental methods) pilot projects. The analysis of the educational research undertaken in CRMEF (dissertations), CRDAPP (dissemination of good practices), and UCRP (compilation, analysis, and dissemination), shows that reading in Arabic is the subject of little to no research in these institutions. On the other hand, there is a strong interest in school projects relating to environmental issues, etc. It is proposed to reorganize the method of selecting topics of educational research by introducing, on an annual basis, the most current topic (nowadays, reading), and to combine this choice with measures of recognition of best works.

Status and training of stakeholders in initial teacher training

School-based training appropriately makes up 60 percent of the total volume of the initial training, according to analysis of anomalies and limitations of the training delivered by former CFIs and CPRs. However, the lack of an official status for mentor teachers jeopardizes practical training year after year, or at least delays it tremendously. The field of teacher education is undergoing rapid and innovative changes that trainers are forced to follow and understand. In addition, the field of basic education undergoes knowledge changes, demographic changes, changes in priorities due to globalization, etc. Both inside and outside Morocco, there are innovations and experiments that have demonstrated their effectiveness in subject-specific teaching (especially reading, the focus of this report) and all education stakeholders—trainer teachers, mentor teachers, inspectors, etc.—need to not only keep updated on these experiences and lessons but also integrate them in the initial training of primary teachers. To this end, it is necessary to know the basic tools and to make use of them for self-training to stay abreast of ongoing innovations.

Bridging the gaps between initial training and continuous training

The relationship between theory and practice continues to pose a challenge to trainees. They deplore the fact that right after learning theoretical notions about reading (for example, the declarative, procedural, and situational forms), they are expected to apply these concepts in practice, under the supervision of a mentor teacher who shows little interest in this kind of knowledge. For this situation, we recommend starting first with the school-based practice and then switching to theory to get explanations and solutions to the problems encountered during the practical training.

Training future teachers will only reach its final stage of development if a complementary relationship is well established between the initial training and continuous training, defining its conditions, and identifying their common issues like the construction of knowledge and promotion of methods and techniques for reading. Reinforcing a spirit of teamwork between the new and old stakeholders is another possible measure. Also, training courses on reading will only benefit the training of future teachers in reading (and other activities as well) if the trainees are supervised by the entire teaching staff involved in the process of preparation, enforcement, and regulation. For such stakeholders, the system of alternate training seems to be inappropriate because it is limited to the travel from school to CRMEF then school, then CRMEF, while there is no such back and forth movement between the two institutions in terms of learning activities. So, we suggest co-training as the most suitable concept for building this movement.

Co-training seems to be the ideal condition for the transition from theory to practice, and vice versa. It is smoothly implemented, unlike the ongoing system. The implementation of this concept implies the need for providing continuous training to trainers and mentor teachers, which is, by the way, a strong demand expressed by these two categories of teachers. Co-training should be oriented towards innovation in the field of teacher training. (See box below to get a more detailed definition of co-training).

The Concept of “Co-training”

Initial teacher training in the CRMEF is composed of a school-based practicum that is supervised by mentor teachers from the classroom as well as the CRMEF trainer. The study found that there is a lack of coordination between the two that many attribute to an absence of an official framework in which to do so. The idea of ‘co-training’ is to create a coordination mechanism that would facilitate cooperation in research, subject-based training, supervision of teacher trainees during practicum, etc. This idea comes from what is already known as “co-education,” which refers to the notion of involving parents and teachers in the education of children, by recognizing what each party brings and its complementarity in the common objective of the child’s growth and achievement. In co-training, complementarity (rather than opposition) is sought between the strengths that trainers and mentor teachers each bring to the common goal of effective initial training of future teachers. Co-training does not describe just a simple relationship between the CRMEF and the practicum school. Trainers and mentor teachers “co-train” when they consider the training needs of the trainees while respecting their relative areas of expertise and knowledge. This assumes recognition of and respect for these relative strengths of each. The implementation of co-training requires serious coordination between these categories of trainers.

In this regard (promoting better coordination between the stakeholders to improve education quality and outcomes), “professional development schools”³³ offer another concept to be considered. Here, mentor teachers are part of the initial training institution in a spirit of partnership that considers the practical experience gained at schools and the theoretical experience of training institutions valuable. Compared to the current system in Morocco, the difference is that the school as a whole is involved in the professional development of trainee teachers, not only the mentor teacher; the trainee plays a significant role in the school life, not only the practice lessons; and the mentor teacher, him or herself, is given a higher role and has same status as the trainer. It is also an opportunity to think of practical training from the perspective of medical training, where the internship in the hospital conducted during the first year of service is counted as an additional year of the qualifying training.

Means and methods of reading instruction

Reading instruction could benefit from the introduction of new materials and methods proven efficient; these should be integrated in the two parts of initial training: theory and practice.

- Use the basic skills (knowledge of letters and sounds) to learn to read progressively.
- Help pupils develop the oral language through reading stories orally, producing original language (oral and written based on the pupils level) as a distinct activity from that of repetition, recitation, and memorization.³⁴
- Use word morphology for the improvement of vocabulary and recognition of words.
- Let pupils progress at their own pace and do not push them to progress either very quickly or too slowly by using reading material well adapted to the different levels.
- Spend more time on free reading and let children choose books for themselves (from the classroom library, for example).
- Help pupils give meaning to what they read so they do not just combine words and syllables.
- Support pupils in their path to become independent readers through diversified media and approaches.

Only when we equip pupils with the fundamental reading capacities during the first years of school can we assist them to acquire the basic functions of reading:

- Read to entertain oneself
- Read to open a window onto the world
- Read to know
- Read to find answers to questions
- Read to succeed
- Read to give a meaning to one’s environment

³³ See, for example: <http://www.ncate.org/ProfessionalDevelopmentSchools/tabid/497/Default.aspx>

³⁴ This is not to imply that there is no room for these activities (recitation and memorization) in the process of learning to read; the point is that children need opportunities to create language, to make mistakes, and to have themselves corrected in order to become autonomous readers.

Annex 1: References

- (1) منهاج مسلك تأهيل أساتذة التعليم الأولي والابتدائي
 - (2) دليل المجزوءات المستعرضة (3) الوثيقة الإطار (4) دليل التقويم
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Annex 2: List of Teachers in Training Thesis

Recherche intervention des stagiaires

Area and subject	Author	CRMEF
منهجية تدريس القراءة الأسس ، الأنشطة، أساليب القراءة	محمد بوجة Mohamed Bouja	Marrakech
العزوف عن المطالعة الحرة لدى متعلمي المدرسة الابتدائية	خديجة كورز و مريم حمدي بتأطير من الأستاذ خالد البكاري Khadija kourz et meryem hamed – encadré par le professeur khalid Elbakari	Marrakech
دور النصوص الوظيفية في تنمية كفاية التواصل لدى المتعلم –المستوى السادس نموذجاً-	ربيعة أكنو - تحت إشراف الأستاذة بهيجة أدمين	Marrakech
صعوبات تعلم القراءة لدى تلميذ المدرسة الابتدائية	حنان كندولي تحت إشراف الأستاذ خليفة لقطيب	Marrakech
أفضال القراء الحرة على المتعلم	خولة ناموس وإيمان المغاري الإدريسي - تحت إشراف الأستاذة بهيجة أدمين	Marrakech
عسر القراءة أسباب مظاهر وحلول – المستوى السادس نموذجاً	محمد حردان وبتأطير من الأستاذ المكون مولاي عبد العزيز بومسهولي	Marrakech
الصورة مابين الأهمية وصعوبات التوظيف : مكون القراءة مثال	آمال الجراجري – تحت إشراف الأستاذ شوقي حشير	Marrakech
دور الصورة في توظيف نص القراءة	محسن أغغاي – تحت إشراف الأستاذ عباس البزار	Marrakech
التعثرات التي تواجه المتعلمين أثناء القراءة الشعرية –المرحلة الثالثة-نموذجاً	فاطمة أعلام تحت إشراف الأستاذ منصر بوشعيب	Marrakech
قضايا معاصرة في صعوبات التعلم	الدكتور فتحى الزيات	Rabat
الصعوبات القرائية بالمدرسة الابتدائية	إيمان شعبي و إيمان الزنبري تحت إشراف الأستاذة جميلة كزير	Rabat
الأنشطة الموازية وأثرها على التربية والتعليم- الموسيقى والمسرح أنموذجين	جواد بطاطة وبدر عادل إشراف الأستاذة كوثر بنسليمان	Rabat
الصعوبات التعلمية عند الأطفال ذوي الإضطرابات اللغوية –دراسة حالتين-	زينب الحلبي وسعاد بنجدي تحت إشراف سمية القدار	Rabat
الصعوبات القرائية بالمدرسة الابتدائية	عصام أبو علي إشراف الأستاذة جميلة كزير	Rabat
الصعوبات القرائية الناتجة عن أسباب فزيولوجية من خلال معجم إعاقات النمو	جمال آيت بوجمعة وجمال آيت منصور تحت إشراف الأستاذة جميلة كزير	Rabat
Séquences de Formation initiale pour le primaire	MENESFCRS -Unité Centrale de la Formation des Cadres	Rabat
Difficultés d'apprentissage de la lecture en 3 ^{ème} année de l'enseignement primaire	Omar afraoui et Rachid Boulaalem Encadré par lalla Faouzia Debbi	Rabat
Dispositif de Formation Initiale en français pour l'enseignement primaire -le dispositif modulaire-	MENESFCRS -Unité Centrale de la Formation des Cadres	Rabat
Dispositif de Formation Initiale en français pour l'enseignement primaire -Module « Communication écrite »	MENESFCRS -Unité Centrale de la Formation des Cadres	Rabat

Language Laboratories

Title Search	AREF / Delegation	workplace (name of the school or the administration)	Year of Work
وظيفية درس اللغة العربية بالشعب العلمية والتقنية من التعليم العام: تشخيص الواقع وتطوير الآفاق.	Gharb-Chrarda-Bni Hssein		présentée au Forum
الدرس اللغوي من درس المعرفة إلى شعرية اللغة.	Guelmim-Esmara	نيابة طانطان	En cours depuis Déc_2011
سلطة الحكمي/ الحكاية واللغة العربية، أية علاقة	I'Oriental	إعدادية علال الفاسي نيابة وجدة	En cours
تحسين مادة اللغة العربية	I'Oriental	م/م تفرست نيابة الدريوش	En cours
الدرس اللغوي بالمدرسة المغربية الواقع والآفاق	I'Oriental	ثانوية جابر بن حيان التأهيلية نيابة جرادة	En cours
الكتاب المدرسي لمادة اللغة العربية بالتعليم الثانوي التأهيلي: قراءة في المنجز	I'Oriental	ثا. سلوان الحساني التأهيلية – نيابة الناظور	présentée au Forum
منهجية شرح الكلمات في الكتاب المدرسي بالمرحلتين الابتدائية والإعدادية	I'Oriental		présentée au Forum
نحو منهجية لتدريس اللغة العربية بالثانوي التأهيلي في ضوء بيداغوجيا الإدماج	I'Oriental	ثانوية سلوان الحساني التأهيلية	En cours depuis 2012
أثر الرصيد اللغوي المروج في النص الوظيفي في التعبير الكتابي نموذجا بالمستوى السادس ابتدائي	Souss Massa Daraa	م. ابن خلدون / ورزازات	En cours
واقع اللغة العربية في منظومة التربية والتكوين : العوائق والبدايل لأجل التحكم في الفصحى.	Tadla Azilal	AREF	présentée au Forum
ديداكتيك الدرس اللغوي واستراتيجية استثماره	Tadla Azilal		présentée au Forum
استثمار الأنشطة المدمجة في تطوير أداء المتعلمين في اللغة العربية.	Tadla Azilal	AREF	En cours depuis le 01/09/2011
دراسة أثر الاشتغال بوضعيات الإدماج على كفايات التعبير الكتابي في مادة اللغة العربية بمستوى الخامس ابتدائي.	Tanger-Tetouan	فريق مختبر التجديد والبحث التربوي بتطوان	En cours depuis Nov_2011

تعلم اللغة العربية في ظل التعدد اللغوي بالمغرب	Taza-Houceima-Taounate		En cours depuis Janv_2012
الأخطاء الشائعة في اللغة العربية بين التصويب المعياري والتجاوز التداولي	Taza-Houceima-Taounate		En cours depuis Mars_2011
معاني حروف الزيادة في الفعل الثلاثي والرباعي	Taza-Houceima-Taounate		En cours depuis Mars_2011
التقويم في بيئات إدماج بين التصور والتطبيق – اللغة العربية نموذجاً.	Taza-Houceima-Taounate		En cours depuis Fév_2011
تدبير أسبوع الإدماج في اللغة العربية باعتماد تكنولوجيا الإعلام والاتصال	Taza-Houceima-Taounate		En cours depuis Janv_2011
Enjeux de la communication dans les établissements scolaires (Enquête sur l'impact d'une formation en communication au sein de quatre lycées de la région Chaouia-Ouardigha)	Chaouia-Ouardigha	ثانوية ابن عباد التأهيلية/ نيابة سطات	En cours depuis le 01/02/2012
Evaluation de la production de l'oral en FLE_ Etude comparative entre l'enseignement public & l'institut français de Casablanca	Chaouia-Ouardigha	تأهيلية الإمام مالك	présentée au Forum
Les difficultés d'apprentissage de l'expression écrite à la lumière de la pédagogie d'intégration	Laayoune-Boujdour-Sakia AL Hamra		En cours depuis 2012
مقومات الإرساء الجيد للموارد: مواد اللغة الفرنسية بالتعليم الابتدائي نموذجاً	l'Oriental	مدرسة بدر أحفير نيابة بركان	En cours_2012
تصنيف أفعال المجموعة 1 و2 و3 إلى جميع الأزمنة في اللغة الفرنسية	l'Oriental	مدرسة موسى بن نثير جرادة	En cours depuis Janv_2012
Le théâtre en classe de français	Tadla Azilal	AREF	En cours depuis le 01/05/2011
استغلال المراقبة المستمرة وأخطاء التلاميذ لوضع متن corpus حول الدعم لتجاوز الثغرات في التعلم. السلك الابتدائي (اللغة الفرنسية)	Tadla Azilal	AREF	En cours depuis 01/09/2011

L'impact de l'évaluation par une situation d'intégration sur les performances en expression écrite en français des élèves marocains de la 5e année primaire	Tanger-Tetouan	مؤسسة الأبرار الخاصة_ تطوان	En cours depuis Nov_2011
Le curriculum du français au collège et les problèmes d'apprentissage	Taza-Houceima-Taounate		En cours depuis Janv_2011
التحويل الرقمي لدروس الثانية بكالوريا_ إنجليزية	Chaouia-Ouadigha	ثانوية ابن عباد التأهيلية/ نيابة سطات	En cours depuis le 10/02/2012
استغلال المراقبة المستمرة وأخطاء التلاميذ لوضع متن corpus حول الدعم لتجاوز الثغرات في التعلّيمات. اللغة الانجليزية	Tadla Azilal	AREF	En cours depuis le 01/09/2011
إشكالية تعميم تدريس اللغة الأمازيغية بجهة الشاوية وردية	Chaouia-Ouadigha	مركز تكوين أساتذة التعليم الابتدائي	présentée au Forum
واقع تدريس اللغة الأمازيغية	Meknès Tafilalt	نيابة الرشيدية	En cours depuis 2011
تدريس المواد العلمية باللغة العربية هل يدعم تعلمها والارتقاء به أم يعوقه؟	Chaouia-Ouadigha	ثانوية ابن عباد التأهيلية/ نيابة سطات	En cours depuis le 10/02/2012
أخطاء التلاميذ اللغوية والأسلوبية مستوى ثانية باك آداب نموذج	Fes-Boulmane	نيابة فاس	En cours depuis le 01/04/2012
إشكالات تدريس اللغات بالمدرسة المغربية	Grand Casablanca		En cours depuis Nov_2011
La langue et son importance dans les apprentissages	Grand Casablanca	مركز تكوين المعلمين والمعلمات	En cours depuis Nov_2011
النص والمنهج في المدرسة المغربية.	Guelmim-Esmara	AREF	En cours depuis Nov_2010
صعوبات تعلم التعبير الكتابي على ضوء بيداغوجيا الإماج في المدرسة الابتدائية_ المدرسة الابتدائية ابن زيدون نموذج المستوى : السنة الرابعة من السلك المتوسط	Laayoune-Boujdour-Sakia AL Hamra	المدرسة الابتدائية ابن زيدون	présentée au Forum
إدراج الثقافة الحسانية ضمن المقررات الدراسية الجهوية	Laayoune-Boujdour-Sakia AL Hamra	ثانوية حي القسم التأهيلية	En cours depuis le 15/09/2011

التواصل الثقافي التربوي في خطاب اللغات الأجنبية التركيز على برامج التبادل المغربي الأمريكي في مجال التربية والثقافة	l'Oriental	ثانوية المربين - تاويرت	En cours_2012
معاجم ثنائي وثلاثية اللغة في مجالات معرفية مختلفة	l'Oriental	ثانوية الشريف الادريسي التأهيلية نيابة وجدة	En cours_2012
L'intégration dans le discours de classe de langue: enjeux, formes et tâches discursives	l'Oriental	نيابة تاويرت	En cours_2012
الرصيد المعجمي في الكتاب المدرسي بالتعليم الأساسي	l'Oriental	نيابة بركان	En cours depuis 2011
معالجة التعثرات القرائية (عربية/ فرنسية)	l'Oriental	م/م تيكورين نيابة بركان	En cours depuis 2011
إدماج الموارد اللغوية في حل الوضعيات الإدماجية	Oued Eddahab-Lagouira	إ. محمد السادس	En cours depuis le 01/11/2011
réception du texte littéraire : De la compréhension littéraire à la compréhension fine	Tanger-Tetouan	الثانوية التأهيلية مولاي محمد بن عبد الله العرائش	En cours_2013
اسباب تدني مستوى التلاميذ في مهارات القراءة و الكتابة في المراحل الابتدائية و طرق علاجه	Tanger-Tetouan	مجموعة مدارس ترعة شفشاون	En cours_2013
la littérature de jeunesse à l'école marocaine	Tanger-Tetouan	مدرسة عبد الرحيم بوعبيد_طنجة أصيلا	En cours_2013

Annex 3: Study methodology and instruments

Table A-1. Table of Data Collected

Component and methods		Targets					Implementation
Study	Method	Nature	Code Target	Number targeted	Number achieved	% achieved	Type of tools
2	qualitative	Inspectors from central level	D	6	5	83%	Focus group (1)
		Teachers trainers	A	8	11	138%	Interview
		Teacher in training	B	8	15	188%	Focus group (2)
		Teacher in training	B	4	5	125%	Classroom observations
		Teacher supervisor/trainer	C	4	5	125%	Interview
		Staff laboratory pedagogical research	E	3	1	33%	Focus group (2)+visit
		Not planned			22	Na	Internal meeting CRMEF
	quantitative	Director CRMEF	F	15	14	93%	Online survey
		Trainer in Arabic/sciences of education	A	30	20	67%	Online survey
		Teacher in training	B	16	22	138%	Questionnaire tablet
		Teacher in training	B	16	16	100%	Classroom observations
3	quantitative	Teachers	G	150	191	127%	Classroom observations
		Teachers	G	150	191	127%	Questionnaire tablet
	qualitative	Pupils	H	20	23	115%	Interview
		Teachers	G	24	24	100%	Classroom observations
		Teachers	G	24	24	100%	In-depth Interview
		Parents	I	12	15	125%	Focus group (2)
		Teachers	G	24	22	92%	Focus group (3)
		NGOs and civil society organization	J	24	15	63%	Focus group (2)

Qualitative data collection

Component 2 qualitative data collection took place from April 27 to May 8, 2014, and from May 2 to 14 for Component 3. The persons interviewed showed interest in the topic of reading and collaborated actively in the discussions.

Though not originally planned, the research team was invited to participate in a CRMEF internal meeting on teachers training.

Interviews with pupils, parents, and NGOs were not originally planned in the terms of reference but provided valuable input following a recommendation from MENFP.

Audio files of the different focus groups and interviews have been used to transcribe the notes where necessary. All qualitative information is currently being referenced with a number in a master table, including the reference of the audio file.

Quantitative data collection for Component 3

The original plan was to survey 50 schools for Component 3 quantitative data collection, but it was also possible to survey one satellite school per mother school (*Ecole Mère*). This allowed observations of multigrade teaching. Including satellite schools increased the number of schools surveyed to 75 and the number of teachers from the 150 originally targeted to 191. Only one school that was closed in the afternoon had to be replaced by another school. Otherwise, all targeted schools were surveyed, and the response rate at the school was 100% after replacement (one school). Some teachers from targeted classes were ill or absent that day and were not replaced.

The quantitative data collection come from:

- Classroom inventory
- Classroom observations (snapshot)
- General comments from the field researcher on the lessons (use of national language, etc.)
- Face-to-face questionnaires on tablets
- Face-to-face open ended questions
- Self-administered questionnaire (26 questions)

Open-ended questions have been introduced on preferred domains of in-service training, measures to improve reading, and assistance needed in this area (general questions). This provided valuable material to triangulate quantitative data and qualitative data collected by senior researchers in order to establish profiles of teachers. Analysis of the open questions is presented in **Annex 3**.

Twenty-six questions were self-administered in a paper questionnaire, and responses were entered by field researchers into the database (via the tablets). The 26 questions each have two statements, and each teacher had to choose the statement deemed most appropriate. Although the 26 questions were presented in both Arabic and French, translation may not have embraced all the nuances between the different statements. Moreover, these questions were asked after classroom observations (30 to 40 minutes with classroom inventory) and the questionnaire (30 to 45 minutes). For all these reasons, the reliability of this instrument is lower than expected.

When cleaning the data, among the 191 teachers, 13 comments have been deleted. The result is a clean file and weighted data, merging data on classroom observations, inventory class, closed questionnaires, 26 questions, and open questions for 178 teachers.

Quantitative data collection for Component 2

The survey protocol, with minor adjustments (supplementary questions addressed to teachers in training) was identical for teacher in training and in-service teachers to enable comparisons. However, the sample size for teachers in training does not allow valid statistical inferences about the entire population.

Data collection for teachers in training was conducted in the schools where the school-based practice took place (all were satellite schools); 23 teachers have responded to questionnaires, against 16 planned and 16 teachers observed.

The conditions of organizing teacher training in the practice schools (how they deliver reading instruction by rotation, in a small class, under the observation of teacher supervisor) prevent strict comparisons between teachers training and in-service teachers with regards to classroom observations.

To allow comparison, the same questions were asked of teachers in training and in-service teachers while noting that there is a specific component of the survey for student teachers. However, most questions about teaching practices, such as assessment methods and remediation, do not apply to teachers who spend very little time in each school who are not formally asked to evaluate students. It is possible to compare perceptions of teachers in training and in-service teachers.

An online survey was conducted among CRMEF directors and teacher trainers teaching the Arabic language and education sciences. The data suffer from non-total and partial response; 11 directors responded of 13 (since trainers from Rabat and Marrakech were interviewed in person, they were not asked to fill out the online survey) and 12 trainers.

The figure of 12 trainers must be compared with the actual number of trainers in Arabic and Education Sciences to calculate a correct response rate. Some directors of CRMEF annex facilities responsible for the training primary school teachers responded to the CRMEF questionnaire. Many directors were appointed the starting day of the survey, which could affect the level of priority given to the survey.

Sampling methods

1. Component 3- Quantitative survey of teachers

Description of the sampling frame: The MENFP provided two school databases containing general information such as the name of the school, community, province, and municipality. One database is organized to show a line = a school. The other database is organized to show a line = a school grade level. Schools are located in AREFs targeted by the study namely Rabat - Sale - Zemmour -Zaer and Marrakech - Tensift - Al Haouz. The databases provide information on the number of students by level, which will be the weight of the schools in the sample (Grades 1, 2, 3). It also contains the number of classes by grade and multigrade classes.

The second database allows us to see in advance the number of teachers in schools at all grades, though the number of teachers per grade is not specified. The number of teachers for Grades 1 to 3 is estimated by dividing the number of teachers at all grades (1 to 6) by two. The information on enrollment of students and teachers has been collected directly from the schools to directors to properly calculate sampling weights.

Exclusions (private schools, original education, satellites). Private schools are not included in the sample because they are not covered by the USAID intervention.

In the sampling frame, four schools were identified as having ‘original education’ (*enseignement originel*). They were also excluded from the sampling.

Target population. The study seeks to observe the perception and practices of teachers in relation to the teaching of reading in Arabic. To do this, the target population consists of teachers in Grades 1 to 3 in primary public schools. These will be randomly selected from each school on the basis of the list of teachers in the school on that day. Fifty schools will be included in the study, supplemented by satellite schools (one per core/mother school).

Variables of interest. There are several variables of interest in the study. We try to measure teachers’ practices (the share devoted to individual work with students, the distribution of a lesson areas, the equipment used) and perceptions (opinion on the readiness of teachers to teach reading, opinion on the objectives to be achieved by students by grade, etc.).

One of the main variables that influence teachers’ practices and perceptions is their experience in primary education and period of initial training (changing over time). The sample is designed to achieve maximum variance in teachers’ experience. Thus, the AREF Rabat was selected as most likely

to include experienced teachers (which was confirmed by the delegate of Rabat), and rural schools, especially satellite schools, were selected as they potentially have less experienced teachers.

The AREF of Marrakech, with several variants of spoken Amazigh, was chosen so that the sample would include a variety of language issues.

Original sampling. As noted above, the sample will be made based on the number of students in Grades 1, 2, and 3 of each school/province/AREF. By dividing by the number of total students in Grades 1 to 3 by AREF, we have the following results (*Table A-2*):

Table A-2. Number of Schools by AREF and Environment (50) Divided by the Number of Students in Grades 1–3

	Number of schools	
	Rural	Urban
AREF Marrakech - Tensift - Al Haouz	23	10
AREF Rabat - Sale - Zemmour –Zaer	5	12

The AREF Marrakech contains enough varieties of school; it will have 33 schools in the sample, including 23 rural and 10 urban schools. As for the AREF Rabat, we have 12 urban schools and 5 rural schools. Note that the AREF of Rabat, is almost non-rural; there are often suburban areas outside Khemisset.

The sampling is done in order to reach as many delegations as possible. So we made a distribution of schools retained in each delegation based on the number of students in Grades 1 to 3 (*Table A-3*).

Table A-3. Initial Sample Design Based on the Number of Students in Grades 1–3

Delegations	Number of schools	
	Rural	Urban
Al Haouz	5.7	0.6
Chichaoua	3.6	0.5
El Kelaa Des Sraghna	3.9	1.3
Essaouira	3.6	0.7
Marrakech	2.3	6.0
Rehamna	2.3	0.8
Total Marrakech	23.0	10.0
Khemisset	3.2	2.1
Rabat	0.0	2.0
Salé	0.7	5.3
Skhirate-Temara	1.1	2.6
Total Rabat	5.0	12.0

Intermediate plan (grouping per stratum). The distribution in each delegation sometimes gives less than one school in some delegations that have a low number of students, such as urban schools in Al Haouz, Chichaoua, Essaouira, and Rehamna for Urban and rural schools in Salé. On the other hand, some areas are left with a high number of schools. We therefore proceeded to group some rural and urban delegations according to the following plan (*Table A-4*):

Table A-4. Sampling Plan with Regrouping

	Number of schools	
	Rural	Urban
Al Haouz	6.0	4.0
Chichaoua	4.0	
El Kelaa Des Sraghna	6.0	
Rehamna		
Essaouira	4.0	
Marrakech	3.0	6.0
Total Marrakech	23.0	10.0
Khemisset	5.0	7.0
Salé		
Rabat		5.0
SkhirateTemara		
Total Rabat	5.0	12.0

We get 10 strata with a more consequent number of schools per stratum (at least 4). *Table A-5* shows the final grouping distribution.

Table A-5. Final Sampling Plan

Province	Zone	Number of schools
Al Haouz	Rural	1
Chichaoua	Rural	1
El Kelaa Des Sraghna	Rural	3
Rehamna		
Essaouira	Rural	4
Marrakech	Rural	5
Khemisset	Rural	6
Salé		
Rabat		
SkhirateTemara		
Al Haouz	Urban	7
Chichaoua		
El Kelaa Des Sraghna		
Rehamna		
Essaouira	Urban	8
Marrakech		
Khemisset	Urban	9
Salé		
Rabat	Urban	10
SkhirateTemara		

Multigrade classes and satellites schools. Multigrade classes were not considered in sampling because of the already large number of strata and the reduced number of schools per stratum. Also, in

practice, this criterion is difficult to test because of the change in status that may occur from one year to another. Autonomous primary schools and core/mother schools rarely contain multigrade classes. To observe this variable, it is essential to investigate satellite schools. In the final sample, only four core/mother schools have multigrade classes. The aim was to study as much as possible one satellite school for each core/mother school surveyed. The satellite school choice was based on proximity with the core/mother school surveyed.

Results sample. In AREF Marrakech (Essaouira) an urban school was included in order to include the city of Essaouira.

Table A-6: Distribution of the Final Sample

	Number of schools		Total
	Rural	Urban	
Al Haouz	6.0	1.0	7.0
Chichaoua	4.0	0.0	4.0
El Kelaa Des Sraghna	5.0	2.0	7.0
Essaouira	4.0	1.0	5.0
Marrakech	3.0	4.0	7.0
Rehamna	2.0	1.0	3.0
Total Marrakech	24.0	9.0	33.0
Khemisset	3.0	2.0	5.0
Rabat	0.0	2.0	2.0
Salé	2.0	5.0	7.0
SkhirateTemara	0.0	3.0	3.0
Total Rabat	5.0	12.0	17.0

Sample replacement. A replacement sample was provided in case the schools selected were not accessible or closed. Three criteria were used to choose the replacement school. The first criterion is the type of establishment; a mother school will be replaced by a mother and an autonomous primary school will be replaced by an autonomous primary school. The second criterion is geographical proximity (the replacement school must be in the same town as the school to be replaced), and the third is proximity in terms of weight. Finally, we selected a school of the same type in the municipality with the number of the nearest school from where the main sample was drawn. One school was replaced as it was closed on survey day.

Calculation of sampling weights. Schools are drawn according to their weight (number of students in first to third year). The more students a school has, the more likely it is to be part of the sample. The inclusion probability of a school within each stratum is given by the following formula:

$$P1 = \frac{\text{Number of schools from each stratum}}{\text{Number of students in the stratum}} \times (\text{Number of students in the school})$$

Satellite schools were not randomly drawn, but selected according to a proximity criterion; the probability of selecting a satellite school is equal to that of its core/mother school. The inclusion probability of a teacher in a school is:

$$P2 = \frac{\text{Number of teachers surveyed}}{\text{Number of teachers Grades 1–3.}}$$

Finally, the probability of selecting a teacher is $P1 * P2 =$

$$\text{Probability of selecting the school} * \text{Probability of selection of teachers in school}$$

Annex 4: Analysis of Teachers' Open-Ended Questions

Three open questions were collected from teachers (188) and teachers in training (24) in Arabic and translated into French, and then into English.

- Question 1: In your opinion, what are the most popular areas for in-service training in the field of reading in Arabic?
- Question 2: In general and according to you, apart from the in-service training, what should be done to improve the level of reading in Arabic?
- Question 3: In your opinion, how could you be helped to improve the level of reading among pupils?

The answers to questions 2 and 3 were analyzed together, because their meaning is close. The possible answers were categorized by topic (unit of meaning) proposed by experts and analyzed by the research assistant, statistician, and field researchers. **Table A-7** presents for each modality the percentage of teachers who responded to each theme, for each research component.

Table A-7: Categories and Distribution of Open-Ended Questions on How to Improve Reading

Topics / themes	Teachers (188)	Teachers in training (24)
New technologies ICT	51%	38%
Libraries	31%	58%
Free reading	28%	42%
Improve textbooks	28%	13%
Other teaching materials	22%	29%
preschool	20%	17%
In-service training	20%	17%
Organize parallel activities / organization of competitions	19%	38%
Improve the program	19%	33%
Communication with parents	16%	17%
Improve the number or time of reading sessions	16%	17%
Class size	9%	8%
Classroom reading corner	6%	8%
Improve the working conditions of teachers	4%	8%
Supervision of teachers	3%	4%
Having a psychologist or assistant	3%	8%
Repetition / school mapping	3%	4%
Auto training of the teacher	3%	8%
Reduce or eliminate the multigrade classes	2%	4%
Working in groups	2%	4%
Others	19%	21%

The needs differ somewhat between teachers and student teachers, who are more prompt to identify libraries (58 percent), free reading (42 percent), the organization of parallel activities and competition

(38 percent), and improving program (33 percent) as ways to improve reading. These data summarize their needs, requirements, and suggestions to improve the level of reading in Arabic.

A. The key themes of responses (Questions 2 and 3)

In the extracts below, the focus was on educational inputs such as program, manuals, and in-service training. Indeed, the development of preschool, the provision of libraries, and reading areas are explicit terms that it is not necessary to detail.

1. New technologies—ICT (51.1 percent of teachers)

Approximately 51.1 percent of the teachers mentioned the need to use new technologies (ICT) and other educational materials to improve reading in Arabic among learners. This is the most frequently cited category. With regard to the ICT, most of their proposals can be summarized as follows:

- Provision of CDs containing texts summarized in words, sounds, and images as the learner is more attracted to the sound and image than by written words.
- Seek ways and visual tools to help students gain fluency in reading. Means of explanation: images and posters, electronic tools.
- The reading level in Arabic can be improved through renovation of educational materials through passive tools and animated and electronic interactive tools.
- Modern and practical teaching methods: interactive whiteboard, projector, PC, internet to improve the reading level.
- Develop new ways and provide modern technology
- To improve the reading level, technological tools available to schools should be developed.
- Provide tools like computers, multi-purpose screens; provide teaching tools such as interactive whiteboards and connect the school to the Internet.

2. Improving school manuals (short texts, simple content) (28.2 percent of teachers)

For the second most common response, approximately 28.2 percent of teachers mentioned the need to improve textbooks in order to increase the quality of reading in Arabic among students. For this, they made the following suggestions:

- Be more open about the texts (suspense, tales) and beautiful illustrations to stimulate the learning desire and knowledge. Short reading texts, adapted to the environment of the student.
- Focus on the first two grades for learning to read with reading materials accessible to the students.
- Reduce the number of textbooks by opting for one compatible with the learners and their family and social environment.
- Provide texts that meet students' desires or reading material that the students could read with envy and suspense.
- To improve the standard of reading in Arabic, it would be desirable to simplify the content, especially in the first and second year and even increase the number of sessions devoted to reading.
- To improve standards in Arabic, supervisors should involve teachers in the selection of textbooks adapted to the environment of the learner.

- Reduce the number of scheduled weekly texts; make reading texts flexible by adapting them to the age of the student so that he can understand or appropriate the content. Link text and structures as well as the letters; shorten the text relatively to allow many students to read.
- To develop reading among learners, we must start with simple and short texts, we must consider the number of students in class; the surplus has a negative effect on learning.
- Revise certain texts (quality) of reading and replace texts with content inspired by reality and concerns of learners.

3. Continuing education (20.2 percent of teachers)

Approximately 20.2 percent of teachers said they need further training to improve the quality of reading:

- It is the daily practice of this subject that encourages teachers to discover and stop on any details either in quantity or quality as in-service training allows the exchange of ideas and methods, but the practice remains dependent on teacher's method of work and attendance.
- Hold educational meetings between trainers and teachers or exchange expertise, support activities.
- Focus on in-service training is a pressing need in terms of provision of basic skills for teaching.
- Provide ongoing training of the teachers to inform them of new teaching methodologies in reading and to meet the requirements of the job training (meet the news).
- In-service training in the field of modern methods yielding a radical change in learning: interactive whiteboard, library in classes, images, educational films.

4. Improve the program (18.6 percent of teachers)

Approximately 18.6 percent of the teachers mentioned the need to improve the program to increase the quality of Arabic reading among students:

- Tailor programs to the needs of children from rural areas. Reflect the gradual evolution in reading, particularly at the top level because the students did not receive preschool education.
- The assistance we need to improve the level of reading among students is an adaptation of curricula to the environment of students, and it would be desirable that the choice of texts rests with the teacher who could judge the compatibility of these texts with the minds of his students. In addition simplifying and taking into account the particularities of any region, and the conditions that can contribute to improving the reading level.
- Adopt easy and simple programs. Take into account the conditions of schooling in rural areas.
- Promote programs and courses available to students at all levels, and also require an annual review program to be adapted to the needs of learners, their social and intellectual level.

B. Some teachers' perceptions about the national languages

Only three teachers spontaneously addressed the issue of mother tongues in education: a very unfavorable statement, a rather favorable statement, and a hybrid approach:

- I refuse the use of colloquial Arabic as a means of explanation. We should use modern means (audiovisual), and the student will derive the meaning conveyed by the context in classical Arabic, as the use of colloquial Arabic leads to language interference.
- To improve the standard of reading in Arabic, a language between classical and colloquial can be invented.
- Use language kindergarten-topics and areas that should be part of the experience of the student (attractive).

A teacher recommended: “Practical training in learning to read especially in areas where people do not speak Arabic dialect.”

C. Level of difficulty of Arabic language:

A further analysis of open questions also identified a number of issues related to the difficulty of the Arabic language.

First, teachers have stressed the issue of the length and complexity of the texts that keep the teacher from giving the majority of students in the class an opportunity to read during the reading session. In addition, many of the school textbooks are not adapted to the environment of the students, and also programs and reading materials do not accompany the level of students and their capacity.

In addition, teachers report issues with the complexity of the teaching methodology used in the classroom, because they start from the global method and move to the partial method. At the same time teachers complain of non-support of a large percentage of students at home by parents and also of overcrowded classes.

Finally, teachers reported the unavailability of adequate teaching resources and the insufficient number of sessions devoted to reading in general, on the one hand, and devoted to oral skills development on the other hand.

D. Continuing professional development: Areas requested (Question 1)

The following *Table A-8* presents the desired areas in the context of continuing education (Question 1).

Table A8: Areas of In-Service Training Identified as a Need by Teachers Based on Open Questions

Areas of in-service training	Teachers (188)	Teachers in training (24)
Approaches and methods of teaching reading	34%	29%
ICT and new techniques for reading	32%	29%
Activities and incentive events of reading	29%	29%
Child psychology and management of reading difficulties among students	27%	21%
Language: letters articulation, phonemes, pronunciation	24%	46%
Arabic language and its teaching methods	23%	21%

Observation of lessons and the practice of reading instruction (learning by doing)	12%	17%
Others	17%	33%

The answers are relatively homogeneous among teachers and teachers in training, with the exception of the issue of articulation of letters, phonemes, and pronunciation cited by 46 percent of teachers in training and 24 percent of teachers. As before, the topic of new technologies often returns.

Here is an excerpt from the teachers' responses with regard to the training:

From my perspective, it would, in this context, focus on the access method and overcome obstacles when working in common class, especially in reading, to take into account the time spent and sessions. Streamline concepts for students including the textbook by making them compatible with their daily lives.

- The most important part of continuing education and related reading for Arabic domains are: Studies of phonemes, the ways and means for adapting the visual phonemes.
- The psychological, pedagogical, and didactic areas are considered the most important for us to understand the student and determine his or her capabilities, as well as choosing the right education that will allow the student to overcome weaknesses in reading.
- The most important areas for the in-service training may be limited to: communication domain, including methods of reading, areas related to the articulation of letters, specialized study of the social situation of pupils, field-specific needs.
- Training in behavior with children with reading difficulties. Training in speech therapy.
- Learn how to pronounce the letters and consider joint-words letter-punctuation and the position of the word and figures of speech
- Training in teaching reading technology, use technology as a fun and constructive; management training and resolution of reading difficulties.
- The most important area for continuing education related to reading in Arabic concerns pronunciation of letters.
- Training phonemes, becoming aware of dyslexia and its treatment through speech therapy, primary training in language-teaching methodologies.